Participation, Power and Preferences in International Development

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Abstract

Participatory development is widely touted as the remedy for ineffective and disempowering top-down development models of the past. However, participation can take many different forms, so an important open question for effective delivery of development assistance is: Which forms of participation influence which development outcomes under which circumstances? In this dissertation, I identify six key areas of research related to participatory development: the initial adoption of a participatory institution, the decision by individuals to participate or not, the direct outcomes of the participatory process, the effects on participants themselves, changes in the process over time, and carefully selected comparisons across contexts. I then make specific contributions to three of these areas through empirical research.

The first essay, *Popular Participation, Reciprocity Norms and Conservation Incentives in Bolivia*, examines the decision to participate. In it, I compare the characteristics of participants and non-participants in a compensation program for environmental conservation in Bolivia, and I show that in addition to material incentives, social embeddedness plays a role in motivating participation. The second essay, *Poverty Targeting and Elite Capture in Participatory Planning in Indonesia*, addresses the direct outcomes of participation. In it, I examine the geographical distribution of the outcomes of a participatory planning process in Indonesia, and I show that the benefits are captured most by the least poor areas, but that this occurs in ways distinct from how capture is typically conceived. The third essay, *Gender Inequality and the Multi-Dimensionality of Power in Northern Kenya*, addresses the effects of participation on the empowerment of participants themselves. In it, I assess the impact on

women's empowerment of a program meant to enhance women's political participation in northern Kenya, and I find that while the program largely fails to promote political participation, it has an impact on women's empowerment within the household, very likely due to a component of the program which engaged directly with men.

Overarching themes that emerge across these studies include (1) the importance of increased conceptual clarity not only with respect to the various forms that participation can take and the various goals it can be invoked to seek, but also regarding various hypothesized effects of and motivations for participation, (2) the potential relevance of the implementing agency and its relationship with pre-existing, overlapping social institutions, and (3) the usefulness of engaging with literature on psychology and behavioral economics. Understudied areas for future research include the evolution over time of a particular participatory process and more systematic comparisons of participatory processes across settings.

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Introduction:

Participation, Power and Preferences in International Development

> Leaders who… insist on imposing their decisions, do not organize the people—
> they manipulate them….they oppress.
> — Paulo Freire, *Pedagogy of the Oppressed*

> Promoting participation helps build ownership and enhances transparency and accountability,
> and in doing so enhances effectiveness of development projects and policies.
> — Worldbank.org

Conventional wisdom among practitioners and donor agencies touts beneficiary participation in development interventions as both an end in itself and as a means to improved project outcomes. The World Bank alone has allocated several billion dollars to participatory development in recent years. Various streams of academic literature have attempted to address the effect of participation on development outcomes, but the results have been largely inconclusive. This is due in large part to a lack of clarity about what participation is and what it aims to achieve.

What is participatory development?

Indian parents are asked to monitor performance at their children's schools. The post-apartheid South African government asks women in impoverished townships to work as waste collectors for less than minimum wage. In Bolivia, rural villagers are required by law to participate in local-decision-making committees that propose development projects to the local government. What do these disparate processes spread across the world have in common? All have been labeled as examples of "participatory development."

Participation is more often defined by what it is not than by what exactly it is. Participation was conceived as a solution to the problems of top-down development models of the past, in which development agents decided how best to meet the needs of beneficiaries without directly consulting them. However, while often cited in contrast to this archetypal top-

down model, participation is also not a wholly bottom-up process in which the resources are simply devolved directly to beneficiaries. While this latter model would directly address the same critiques of the top-down model that participation is meant to solve, in reality it still requires the agent to determine how best to distribute funds and to whom exactly. Since the agent lacks knowledge about the social structure, in reality this often reverts at least partially to a participatory model, in which development agents and beneficiaries must collaborate in some way to design, implement and/or sustain a development program.

In the participatory model, both beneficiaries and agents are presumed to be engaged jointly, but the institutions governing that interaction can vary widely. The relative amount of control given to each party then can range from mere consultation of beneficiaries by agents who actually control the project to mere consultation of agents by beneficiaries who control most aspects of the project. Literature on participatory decision-making in democratic governance suggests that participation varies along at least three dimensions – who participates, how they decide, and how much authority those decisions have (Fung, 2006). In the broader sense that participation is used in international development, there are likely even more dimensions along which instances of it differ. The particular institutional form that participation takes depends in part on how those who design it understand the goals of participation.

Effectiveness vs. Empowerment: Differing Models of Human Behavior

Practitioners view participatory development as an improvement over the top-down model for several different reasons, and these policy motivations for participation are often divided according to whether they seek to improve the effectiveness of a given development intervention or to promote the empowerment of the participants themselves. Effectiveness arguments view participation as a way of solving a special kind of principal-agent problem that is prevalent in development aid, in which a development agent, not the principal (beneficiary), controls both the resources and the decisions over how to use them. Empowerment arguments,

on the other hand, concern themselves with a different kind of agency dilemma: the belief that failing to involve people in decisions that affect their lives is inherently disempowering.

These motivations are not mutually exclusive, and in fact they likely seek similar long-term goals. Both are ultimately consistent with Amartya Sen's capabilities approach to development, in which the end goal is to increase people's ability to direct the course of their own lives. However, the two views are based on different underlying models of human behavior, and a focus on one at the exclusion of the other has implications for both the form of participation to be adopted in practice and the design of research studies meant to assess its effects.

Effectiveness motivations pose participation as a way to improve the efficiency of development projects by lowering costs and improving design and targeting. It is strongly informed by rational choice models of human behavior that tend to focus on material incentives and information asymmetries, rather than on more normatively charged (and qualitatively defined) concepts such as empowerment. As such, it is likely to inspire lower cost forms of participation, which involve beneficiaries sufficiently to transfer useful information to project managers and to share some of the costs of running the project.

Empowerment motivations, on the other hand, present participation as an antidote to the paternalistic nature of top-down development, and as such, they seem to encourage high intensity forms of participation in which beneficiaries have considerable control over development projects. They tend to suggest more intense methods of communication and decision, more decision-making on the part of beneficiaries, and involvement at higher levels of institutional choice. Academic studies inspired by the empowerment justification are much more likely to be informed by sociological models of human behavior which focus on social relations and power dynamics, rather than solely on concrete material incentives.

Further complicating matters, these differing understandings of participation, when held by local actors directly involved in the participatory process itself, affect not only affect what we

as scholars define as outcome variables, but are in fact themselves explanatory variables that will influence various empirical outcomes, through effects on both de jure institutional design and de facto participatory deliberations.

Participation as a Dynamic Process

A notable difference between rational choice and sociological models of human behavior is that the former takes preferences as fixed, whereas the latter allows for the possibility that preferences themselves are subject to change. A dynamic view that considers the evolution of participatory processes over time, and the goals of participation as understood by the participants themselves, offers a useful way to synthesize the two approaches.

The preferences and beliefs of those who hold power at the outset will influence the form of participation that is adopted in the first place. The preferences and beliefs of the intended beneficiaries will determine whether or not they choose to participate in the process. However, the preferences and beliefs of all those involved have the potential to be changed through engagement with the process itself, potentially resulting in changes in the power dynamics between groups as well.

In summary, participation is viewed as a potential solution to both the ineffectiveness and disempowering nature of top-down development, but stops short of a fully bottom-up approach by continuing to involve development agents in a joint process with beneficiaries. However, participation may take many different forms and the particular form most likely to be effective in theory and actually adopted in practice depends on contextual factors, including the particular preferences and beliefs of local actors involved in the process, as well as the social and power dynamics between them. In addition, these very same factors that influence participation are themselves subject to influence by participation over time.

Key Questions in the Study of Participation

Because participation is a dynamic process, subject to evolution over time, questions about these preferences, understandings and power dynamics can be examined at discrete points in time during the different stages in a given process, but also through more long-term and holistic views that examine a given process over time and across settings. Below I outline the key sets of questions that studies on participation should seek to answer.

Adoption of the Process: What conditions allow a particular participatory process to be adopted? Who played a role in designing and implementing the process? How did they understand the goals of the process? What are their own preferences and incentives with respect to the outcomes of the process? How are they related, via social structures and pre-existing power dynamics, with those who are intended to participate in and benefit from the process? How did these factors influence the particular form of participation that was adopted?

Decision to Participate: Once a participatory process has been adopted, who actually participates in it and why? How do participants and non-participants differ? What are their preferences and beliefs with respect to the goals of the process? How do they think about tradeoffs between different potential uses of their time and resources? What barriers to entry do they face? What costs do they expect to incur through participation? What pre-existing social structures and inequalities exist that may influence individual desires and abilities to participate and be influential within that process?

Direct Outcomes of the Process: What are the direct outcomes of the process with respect to the stated goals of those who implemented the process and those who are the expected beneficiaries of it? Does the process reflect/aggregate people's preferences in a way that is representative, fair, equitable, and that contributes to the alleviation of poverty and the enhancement of capabilities? Who benefits from the outcomes produced by the process? Who bears the costs?

Indirect Effects on Participants: How are participants themselves (both development agents and intended beneficiaries) affected by their engagement with the process? Are participants 'empowered' through the process? Does participation change their preferences regarding outcomes of the process? Has their understanding of and relationship to the participatory process itself been altered? Has there been a shift in power relations between groups, and if so, do those who initially bore power take action to restore the status quo?

Evolution over Time: How does the process itself change over time, in terms of both its formal structure and informal operations? Do participants wield any influence on the institutional form or the development agents who adopted it? Will the previous questions listed above yield different answers after several years of operation?

Comparisons Across Contexts: Having assessed the effects, both positive and negative, of a given participatory process, how do they compare to similar programs conducted in different contexts? How do they compare to distinct programs conducted in similar contexts? Could a less intensive form of participation have yielded the same benefits? Would a more intensive form of participation have improved the outcomes? Which aspects of institutional design seem to correlate with which outcomes in which contexts?

Contributions of this Dissertation

In this dissertation I make three modest contributions to this literature, each of which addresses one of the key areas of research identified above, each in a distinct context. Such studies are most useful when considered in light of other similar research, and in each paper that follows I attempt to make some observations about how findings relate to previous studies. However, an important area for further research will be to more systematically codify and compare the existing body of research on participatory development.

In the first essay, *Popular Participation, Reciprocity Norms and Conservation Incentives in Bolivia,* I look at the question of who participates and why. In particular, I ask

whether social norms, separate from material incentives, play a role in motivating participation. I look at this question in the context of a compensation program for environmental conservation in Bolivia. Compensation programs are typically presented as operating strictly through the provision of economic incentives and criticized for crowding out other motivations for conservation. This particular program featured in-kind compensations, framing meant to activate pre-existing social norms related to reciprocity, and implementation through pre-existing participatory structures. The form of participation examined in this case is very minimal and more obviously related to rational choice arguments around cost-sharing and incentives than to notions of empowering participants through devolution of decision-making power. Thus, if it successfully engages with social motivations for participation, it seems quite likely that more intensive forms of participation would also.

By examining household survey data collected prior to the introduction of the program, I compare participants and non-participants with respect to characteristics that are related to material/economic, environmental, and social motivations for participation. I find that while economic characteristics are certainly important predictors of participation, social embeddedness and the salience of social norms are also significant. One policy implication of this finding is that practitioners seeking to maximize participation in a program should consider pre-existing social institutions in their program design, but it also suggests that a decision to participate in a given program should not necessarily be interpreted as an indication that the program directly benefits everyone involved.

In the second essay, *Poverty Targeting and Elite Capture in Participatory Planning in Indonesia*, I address questions regarding direct outcomes of the process. In particular, I ask whether program benefits are distributed in ways that (1) reflect the preferences of the population at large and (2) address the needs of the poorest members of the population. I look at this question in the context of a participatory planning process in Indonesia. Indonesia is home to another participatory planning process which has been cited for its success in targeting the

poor. This program, however, arose through different sources and is implemented at a different level of governance, and policy-makers have observed discrepancies that they believe are indicators of corruption in the process. If it is true that this process has been unsuccessful at targeting the poor, it provides an interesting comparison case for why different implementing agencies may lead to different results.

By comparing the geographical distribution of benefits of the process with poverty rate data, I examine the degree of poverty targeting (or lack thereof) in this process. I find that not only is poverty targeting not occurring, but that, in fact, the least poor regions receive a significantly larger portion of the benefits – a potential indicator of elite capture. However, this capture occurs not through the discrepancies that had alerted policy-makers of potential issues with the process, but rather through a much more diffuse pattern of self-interested decision-making. This implies that policies meant to reduce or prevent elite capture must be careful to consider various points of entry for such capture to occur.

In the third and final essay, *Gender Inequality and the Multi-dimensionality of Power in Northern Kenya*, I address effects on participants' themselves, and in particular I ask whether previously marginalized groups can be empowered through participation. I look at this question with respect to gender inequality in patriarchal societies in northern Kenya, where an NGO intervention introduced new spaces for participatory, community-level decision-making, and simultaneously made efforts to improve the ability of women to effectively engage in those spaces. These additional efforts included both training for women and a direct appeal to men. Given the highly patriarchal nature of these communities, as well as their overall impoverishment and isolation relative to the rest of Kenya, this presents an ideal "hard-case" within which to assess potential impacts on women's empowerment.

I examine pre- and post-intervention survey data in both a treatment and control group in order to assess the impact of the intervention on various dimensions of power, operating at distinct levels of governance. I find that while the intervention has mixed results with respect to

women's empowerment at the government and community levels, there are several significant effects at the household level. Comparing these results with recent, similar studies suggests that the direct appeals to men may have driven the increases in women's power. This implies that future interventions intending to empower marginalized groups may benefit from engaging not only with the marginalized group itself, but also with those who wield relatively more power.

1. The Decision to Participate:

Popular Participation, Reciprocity Norms and Conservation Incentives in Bolivia

ABSTRACT

This study examines the motivations that drive participation in an environmental conservation program in Bolivia. Programs that provide financial compensation to promote environmental conservation are often criticized because economic incentives may crowd out intrinsic motivations for conservation. Thus institutions that appeal to both economic and non-material incentives are encouraged. The Acuerdos Reciprocos para el Agua (ARA) program in Bolivia attempted such a strategy, offering in-kind compensations for conservation activities but also making efforts to activate traditional social norms regarding reciprocity. This study seeks to examine whether motivations for participating in this program reflected purely financial calculations regarding the benefits of the program, or whether intrinsic motivations such as pro-environment or pro-social beliefs and norms played a role in the decision to adopt the program. I take advantage of a comprehensive household survey conducted prior to the offer of the program and employ multiple regression analysis to compare those who choose to participate with those who do not. Findings suggest that the effort to engage with social motivations was successful, and that social factors, not financial incentives alone, drive participation in the program.

1.1 Compensation for Ecosystem Services as Social Institutions

Understanding the different motivations that drive people to participate in conservation programs is useful to making those programs more successful. Direct compensations for ecosystem services, often in the form of Payments for Ecosystem Services (PES), have been used across the world for over a decade to promote a variety of environmental behaviors (Landell-Mills & Porras, 2002). However, the motivational characteristics and institutional aspects of such incentive schemes remain under-studied (Vatn, 2010; Muradian et al., 2010), and recently there has been renewed interest in the factors that influence participation in such schemes (Bremer et al., 2014).

Increasingly, scholars suggest that these compensation programs are not comprised purely of market-based incentives, but rather must be viewed as institutions[1] with significant social dimensions. Conceptualizing such incentives from a strictly rational choice perspective is subject to "commodity fetishism," which obscures the social interactions that underscore economic transactions (Kosoy & Corbera, 2010). Compensation systems do not stand alone, but rather require interplay with multiple existing social and political institutions (Corbera et al., 2009). A more practical conceptualization of these incentive structures would take into account power structures and social embeddedness (Muradian et al., 2010).

Even the framing of programs as compensations rather than payments or incentives can influence their success (Wunder & Vargas, 2005; Vatn, 2010). Independent of intentional framing by policy-makers, perceptions of compensations can be influenced by pre-existing local discourse, leading one study to conclude that "PES should not be viewed as a market panacea transcending the local institutional context, but rather as a potentially complementary instrument within a broader rearrangement of environmental governance" (Van Hecken et al., 2012).

[1] Institutions are understood here in the sense popularized by Elinor Ostrom, as "shared concepts used by humans in repetitive situations organized by rules, norms and strategies" (2007).

Cranford and Mourato observe that, ironically, suggested improvements on PES in the literature, such as the use of in-kind compensations and a focus on cooperation and reciprocity (Farley & Costanza, 2010; Fisher et al., 2010; Muradian et al., 2010; van Noordwijk & Leimona, 2010), reflect a return to elements of the community conservation schemes that PES was conceived as an improvement on (2011). After reviewing the pros and cons of each, they propose a two-stage approach that begins by creating a supportive institutional environment for conservation norms and then introduces more explicit financial incentives (Cranford & Mourato, 2011). Other scholars also propose hybrid approaches as a potential solution (Wunder, 2006; Garcia-Amado, 2013).

Fundación Natura Bolivia, an NGO based in Santa Cruz, Bolivia, introduced such a hybrid approach to incentive-based conservation. Its *Acuerdos Recíprocos para el Agua* program takes advantage of long-standing community norms regarding reciprocity and introduces a system of in-kind compensations for forest conservation and watershed protection. This study seeks to examine whether motivations for participating in this program reflect purely financial calculations or whether the effort to engage with social motivations was successful. The results suggest that social characteristics play some role in motivating participation in the program.

1.2 Motivations for Conservation Behavior

A common criticism of incentive-based conservation programs is that financial incentives may "crowd out" intrinsic motivations for conservation and thus be counterproductive in the long run. Several studies provide evidence to support this belief (Cardenas et al., 2000; Jack, 2009; Velez et al., 2010; Kerr et al., 2012; Garcia-Amado et al., 2013). In a recent review of 18 empirical studies on crowding effects of economic incentives for conservation, Rode et al. (2014) find that there is ample evidence of crowding out of instrinsic motivations, although in some cases "crowding in" may also occur. They classify intrinsic

motivations as either pro-nature (perceptions of the value of nature) or pro-social (referring to social norms, reciprocal obligations or altruism). They conclude that more concrete evidence about the circumstances under which crowding in or out may be expected to occur is inhibited by "a lack of appropriate baseline information about intrinsic motivations prior to policy intervention" (Rode et al., 2014).

Relatedly, some scholars have attempted to examine the initial determinants of participation in compensation schemes. Many have observed that participants in compensation programs tend to be larger landowners (Grieg-Gran et al., 2005; Zbinden & Lee, 2005; Kollmair & Rasul, 2010). This may be both because those with smaller properties find it difficult to meet the requirements and because the incentive payments are lower and therefore less attractive to small landowners (Miranda et al., 2003; Pagiola et al., 2005; Bremer et al., 2010). Incentive programs typically require formal property title, which may also result in a skew toward wealthier and more educated participants (Landell-Mills & Porras, 2002; Wunder, 2008). A fear of land expropriation or a more general distrust of institutions is another factor that seems to influence the decision to participate in such programs (Miranda et al., 2003; Southgate & Wunder, 2009). An econometric study meant to disentangle various determinants of participation in Costa Rica's PES program found that there were three major influences: land size, household economic and demographic factors and access to information (Zbinden & Lee, 2005).

More recently, there has been a greater focus on non-tangible motivations for participation, mostly related to environmental attitudes or beliefs. In Mexico, researchers found that perspectives on the values and impact of forest conservation were critical drivers of participation in PES programs (Kosoy et al., 2008). A study in Ecuador found that motivations for enrolling in that nation's SocioPáramo program included, in addition to access to alternative sources of income and low opportunity cost, the value that people placed on the watershed services provided by conservation (Bremer et al., 2014). However, these studies involved

interviews conducted after the decision to participate or not, which raises some concerns about survey bias.

In addition, while some studies examine social capital as a potential outcome of forest conservation (Miranda et al., 2003), as a variable affecting its success (Cranford & Mourato, 2011), or as one of the intrinsic motivations that may be crowded out by PES (Rode et al., 2014), fewer explicitly examine social norms as a motivation for participation in compensation schemes in the first place (Chen et al., 2012).

The growing consensus that incentive schemes must be viewed through an institutional lens requires a closer examination of social motivations for participation, and whether the relative importance of different motivations vary depending on the institutional nature of the compensation scheme.

This study attempts to distinguish between financial, social and environmental motivations for participation. It compares participants with non-participants using responses to a survey conducted prior to the decision to participate. Variables are identified which indicate how likely each person is to benefit financially (or incur costs) from the program, as well as how much they identify with various environmental and social norms, and how socially embedded they are in pre-existing institutions within the community.

Participation in pre-existing social institutions may serve as an indicator of social motivations for three reasons: selection and socialization. First, people who choose to participate in other social institutions are likely already more community-minded than those who abstain from such social involvement. Second, through participating in such institutions, people may be socialized to act in accordance with norms of community-mindedness.

In the research described in the rest of this paper, I ask whether participants in this compensation program differ significantly from non-participants with respect to each of these categories of intrinsic and extrinsic motivations for conservation. The goal of the research is to

assess whether the decision to participate is based purely on a rational cost-benefit calculation, or whether the program has successfully activated environmental and social norms.

1.3 Setting

Santa Cruz, Bolivia & Pre-existing Institutions

During the 1990s, Bolivia introduced several laws that increased decentralization across various sectors. In 1994, the *Ley de Participación Popular* (Law of Popular Participation) set aside 20 percent of national tax revenue for distribution to municipal governments (weighted by population), and gave those municipalities new responsibilities relating to schooling, health facilities and water provision (Kohl, 2003; Pacheco, 2004). In 1996, a new Forestry Law and Agrarian Reform Law were also passed. In addition to changing market incentives to make unsustainable forestry less attractive, these laws also regularized land titling in rural areas and recognized the forest rights of private landholders' and indigenous peoples (Pacheco, 2004).

In addition to granting more power to municipalities, the *Ley de Participation Popular* (LPP) explicitly required grassroots participation in the planning process. It did so mostly through the creation of community-level organizations called *organizaciones territoriales de base* or OTBs, most of which were formed through the formalization of pre-existing community institutions. Through the LPP, the Bolivian government legitimized almost fifteen thousand of these local organizations and granted them responsibility to create community development plans and mobilize community members to contribute labor to public goods (Kohl, 2003). Particularly in rural areas, OTBs often represent intense social obligations to engage in communal work (Albó et al., 1989).

It was through these community institutions that a local NGO, Fundación Natura Bolivia (Natura), offered its system of compensations for ecosystem services in five municipalities in Santa Cruz that belong to the Area Natural de Manejo Integrado (mixed-use natural area) Rio Grande – Valles Cruceños (ANMI RG-VC). Natura identified 130 rural communities within the

study area and randomly selected 65 of them in which to offer their compensations. The compensations contracts are called *Acuerdos Recíprocos para el Agua* (Reciprocal Agreements for Water) or ARAs, and the title is meant to evoke the informal institution of reciprocity norms that are common in many Bolivian communities (Capuma, 2007).

A qualitative study of Fundación Natura's previous attempt to implement ARAs in Florida Provice, Bolivia, reviewed the reciprocal labor sharing arrangements, *minga* and *ayne*, that are common throughout the region (Betrisey & Mager, 2014). According to their review, *minga* typically takes the form of a social event in which community members (usually men) come together to help one household with a large task, and in exchange that household usually provides, music, food and drinks. There is also an expectation that the minga host should participate when another community member calls his own *minga*. *Ayne* is slightly different in that it tends to involve a direct one-to-one interaction in which one community member offers assistance, with the expectation of help in return, though not necessarily of the same form (Betrisey & Mager, 2014). While these traditions are less common today, they have in some cases taken on new forms to retain relevance, and even where the institutions are no longer practiced, people cite their continued influence on community social dynamics. In interviews, farmers cited reciprocity as a key element in their decision to participate (Betrisey & Mager, 2014). This study uses a comprehensive baseline survey to see whether quantitative evidence confirms these ex-post justifications.

Acuerdos Recíprocos para el Agua

The ARAs offered in the ANMI Rio Grande are similar to previous programs implemented by Fundación Natura Bolivia in that they provide in-kind, rather than monetary, compensations for conservation (Asquith et al., 2007) and use framing meant to highlight pre-existing reciprocity norms (Betrisey & Mager, 2014). However, this was the first time they were able to offer the ARAs at this scale and also the first time they could collect a full baseline survey

of the beneficiaries prior to introducing the ARA contracts. This program also differs from previous versions of ARA in that it did not involve a direct one-to-one exchange between specific parties, but rather invoked reciprocity with respect to benefits received from the actions of other community members and from the environment itself.

The communities included in Natura's intervention are rural farming communities, where cattle are a common form of savings. The most abundant crop by far is maize, but on average households maintain between two and three different crops. Sixty-seven percent of households own cattle, ranging from 1 to over 100. On average, households own about ten cows.

Natura offers three types of contracts in the 65 OTBs in the treatment group. Level 1 and 2 contracts are available for forested land within 100 meters on either side of the water source, which is considered the most high impact conservation area. Level 1 contracts pay more and have stricter requirements than Level 2. Level 1 contractholders agree not to deforest and also to remove cattle from the stream area. Level 2 is a provisional contract meant for those who are not able to immediately remove their cattle from the area. They agree not to deforest and receive a reduced rate while they incrementally remove cattle, at which point they will have the option to upgrade to a Level 1 contract. Those with land not within 100 meters of the water source are eligible for Level 3 contracts, which pay less than either Level 1 or 2. The terms are similar to Level 2 contracts – cattle are allowed but the number of cattle in the area under conservation must be gradually reduced.

In all three cases, compensations are delivered in the form of goods meant to be used for conservation activities or conservation-neutral poverty alleviation. These include barbed wire and staples to prevent cattle from entering the water source, cement to harvest water or build shelter for the cattle, plastic tubing and water tanks for irrigation, corrugated iron for housing renovations, lawn seed for improving pasture land, and fruit tree seedlings and beekeeping equipment for income generating activities.

In each treated OTB, Natura visited the community 18 times in six rounds of three visits each. During each of the six rounds, technicians made a first visit in which they present the compensations in an informational meeting to the OTB. During the second visit, they give people the opportunity to sign contracts. During the third visit, they give the first set of compensations. This sequence of three visits was repeated six times in total, such that community members had six opportunities over the course of three years to participate in the program. This was done in part to alleviate fears of land expropriation on the part of some.

1.4 Methodology and Data Sources

This study compares those who participated in the ARA compensation scheme with those who did not, in an effort to see whether they differ significantly with respect to characteristics related to the material costs and benefits of the program, as well as with respect to indicators of intrinsic motivations for conservation, including pro-social and pro-environment norms and beliefs. I first identify questions from Natura's baseline survey that can serve as indicators for financial, social and environmental motivations, respectively. Next I compare contract-holders to non-contract-holders based on each of these variables individually using means tests as well as one-variable logit models. This tells me, on average, how participants differ from non-participants.

Next I include the variables for all three motivational categories (financial, environmental and social) in a series of nested logit models in order to assess their relative impact on the decision to participate. If participants are primarily motivated by the material benefits of compensation, then variables related to the costs of compliance and size of compensation should be the most significant predictors of participation. However, if Natura has successfully activated social and environment-related norms (such as the traditional reciprocity norms described above) in motivating participation in the ARA scheme, then variables such as

belief in the value of the environment and social embeddedness should be significantly correlated with participation.

Following prior literature on adoption of compensations discussed earlier, I include variables for the age and educational level of the household head, legal ownership of land, total land size, access to alternative income sources, debt, and distrust of institutions. I also add some variables on the pre-existing use of the land, and whether or not the land is difficult to access. In addition, I include variables relating to value placed on the environment, and on water in particular, and whether or not individuals associate the environment positively with financial motivations. Finally, I include variables relating to social embeddedness and the salience of social norms, including participation in the OTB, number of generations residing in the community, and perceptions of the community. (See Appendix 1.1 for a list of the survey questions used in the analysis related to each of the three categories of motivation.)

Prior to implementing the ARAs in the Vallegrande region, Fundación Natura implemented a comprehensive household survey in all 130 villages identified within the region. This survey was intended to capture every household in the survey area. It included sections on household members and demographics, household assets and income generating activities, land use, institutional environment and environmental and social values and beliefs. Natura also conducted an additional village-level survey of the OTB leaders in each village, which asked about the existence of various organizations within the community as well as characteristics of the OTB itself. Of the original 130 villages surveyed, 65 were randomly selected to receive the ARA treatment, which involved six rounds of visits to each village.

The list of contract-holders from the six rounds of meetings was then matched to the initial survey in order to assess how those who took up contracts differed from those who did not (within the 65 villages where the contracts were offered). In matching the contract database to the initial survey, some households appeared who had not been captured in the baseline survey. Follow-up interviews revealed that these missing households are a result of landowners

who no longer live in the village, often because they have moved to the city of Santa Cruz for work opportunities. These unmatched contracts represented 136 households, or about 25% of all contract-holding households.

At my suggestion, Natura conducted a follow-up survey to understand why these households were not picked up in the original baseline. Many lived in the community only part-time, or moved from one community in the survey area to another, or live in Santa Cruz with jobs in the city, but continue to own property back in the village. Because it is not possible to identify similar households who did not sign up for contracts, these households are dropped in the initial analysis so that we can compare only those who adopt ARAs with those who do not among people who were present at the time of the initial survey. However, a follow-up analysis did include them to reveal any relevant differences in outcomes. While the relative importance of financial vs. social motivations does seem to increase when these households are included (which is logical given the likelihood that they do not reside full-time in the community), the same social motivations are statistically significant regardless of whether they are included or not. (See Appendix 1.2 for the outcomes of this regression analysis.)

1.5 Findings

Descriptive statistics comparing participants (contract-holders) with non-participants reveals statistically significant differences between the two groups related to many of the financial characteristics cited in previous literature (Table 1.1). Contract-holders own more land on average and are more likely to own their own homes and have larger homes (indicators of wealth). They are more trusting of institutions. They also tend to own more cattle. This is particularly interesting because it indicates that the greater cost of complying with the contract due to cattle ownership is outweighed by the benefits of wealth that cattle ownership represents.

Table 1.1: Descriptive Statistics Comparing Contract Holders with non-Contract Holders

	No Contract		Contract Holders			
# of HHs from original Baseline	888		407			
	mean	se	mean	se	p-value	
Demographics of HH Head						
Age	50.03	0.59	50.26	0.70	0.82	
Education	4.69	0.12	4.90	0.17	0.33	
Wealth & Opportunity Cost						
Total Land	23.76	2.32	42.82	4.30	0.00	*
Forested Land	3.88	0.59	6.35	1.30	0.05	*
Pasture Land	18.79	2.31	31.88	3.35	0.00	*
Cultivated Land	2.33	0.16	3.03	0.16	0.01	*
% Own Livestock	0.58	0.02	0.87	0.02	0.00	*
# of Cattle	8.65	0.55	15.26	0.82	0.00	*
% Own Home	0.77	0.01	0.89	0.02	0.00	*
# of Rooms	2.74	0.04	3.26	0.08	0.00	*
Access to Alternative Income	0.63	0.02	0.67	0.02	0.16	
Loans	0.10	0.01	0.14	0.02	0.09	+
Distrust of Institutions	0.04	0.03	-0.08	0.04	0.03	*
Environmental Values & Beliefs						
Prioritizes Environment	0.39	0.02	0.44	0.02	0.07	+
No perceived forest benefits	0.09	0.01	0.05	0.01	0.03	*
Water Problematic	0.65	0.02	0.67	0.02	0.59	
Need to Harm Envt	1.44	0.04	1.36	0.05	0.23	
Better incomes	4.61	0.03	4.71	0.04	0.04	*
Gov't Responsible	3.57	0.05	3.67	0.08	0.23	
Neighbors Envt	1.91	0.05	1.82	0.07	0.27	
Forest Better or Worse	1.76	0.03	1.76	0.04	0.92	
Conserve by No Chaquear	0.72	0.02	0.74	0.02	0.51	
Community Participation & Social Beliefs						
Comunidad_generaciones	1.98	0.03	2.29	0.05	0.00	*
OTB membership	0.73	0.01	0.88	0.02	0.00	*
OTB meeting attendance	0.94	0.04	1.31	0.06	0.00	*
Community Work	0.52	0.02	0.73	0.02	0.00	*
Frequency of Community Work	3.95	0.26	4.65	0.52	0.00	*
Minga_ayni	0.36	0.02	0.49	0.02	0.00	*
Gente_Coopera	3.67	0.05	3.93	0.07	0.00	*
Gente_Ayuda	3.54	0.05	3.64	0.08	0.24	
Trabajar_Ganar	4.63	0.03	4.69	0.04	0.26	
Ganar_Compartir	2.84	0.06	2.77	0.08	0.46	
Contribute Equally to Problem	0.76	0.02	0.78	0.03	0.67	
Suffer equally from Problem	0.90	0.01	0.88	0.02	0.44	

Contrary to some more recent studies of PES, however, in which participants cite environmental reasons in interviews regarding their motivations, there do not seem to be very significant differences between adopters and non-adopters with respect to environmental beliefs or values. One of the most significant difference between the groups in this category is related to whether or not the respondent associates improved environmental outcomes directly with improved incomes, which is arguably another indicator of financial incentives. On average, contract-holders are also slightly more likely to prioritize the environment over other values and slightly less likely to say that they perceive no benefits from the forest.

There are also large differences between contractholders and non-contractholders with respect to their degree of participation in various community institutions, such as OTB membership, having participated in minga/ayni specifically or in general community work, and the number of generations a family has been in the community. With respect to beliefs about the community, the only question that indicates a difference between the two groups is when they were asked whether or not people in their community are likely to cooperate.

When these categories of effects are included in a single regression model (Table 1.2), their relative importance becomes clearer. Some of the variables included in the table of descriptive statistics were not included in regression analyses. This was done either because the variable contained too much missing data to justify its inclusion in the model, or because the variable was deemed collinear with other variables in the table. The regressions included in Table 1.2 are logit models with otb-level fixed effects, where the outcome variable is binary, coded as 1 if the household took up at least one ARA contract and as 0 if the household did not participate at all in the compensation scheme. Model 1 looks at the impact only of variables related to a rational choice framework – variables meant to indicate the size of the financial incentive or of the costs to participation, as well as opportunity costs to participation, barriers to participation and beliefs that could influence the perceived benefits (distrust of institutions). Model 2 looks at the impact only of variables related to non-monetary incentives, such as

environmental and social values and beliefs and participation in other community level institutions. Model 3 combines all variables into one model in order to assess their relative importance.

Financial characteristics are significant determinants of uptake, but I cannot confirm whether these operate primarily as motivations or simply as barriers to entry. The fact that indicators of wealth are correlated with greater likelihood of contract take-up even when controlling for things like land size (which would directly impact the size of the possible compensations), seems to imply that their significance has more to do with the absence of barriers to entry, rather than the presence of greater financial incentives for participation. The significance of percent pasture land also seems likely related to opportunity cost (as those with no pasture land at all are perhaps dependent on letting their cattle graze in forested areas. However, this is inconclusive without further data. What we can say for sure is only that those who choose to take-up the ARA contracts are more likely to have formal property rights, use more of their land for pasture, have larger homes, and are more likely to have land that is difficult to access and therefore can be conserved with little opportunity cost.

When controlling for other factors, none of the variables relating to environmental values and beliefs seem to make much of a difference in determining contract take-up. However, the number of generations a household has been in the community is significant, as is whether or not the household identifies itself as a member of the OTB. OTB membership, in fact, has the largest coefficient of any variable included in the regression analysis.

However, it is difficult to know how to interpret the impact of OTB membership. At first glance, this is not especially surprising. From a rational choice perspective, this could merely be attributed to the information that is transmitted through the OTB meetings. Because the informational meetings were conducted through the OTBs, it may simply be the case that those who are not OTB members are less likely to know that the contracts exist.

Table 1.2: Determinants of Contract Take-up

	(1)	(2)	(3)
Age	-0.0101		-0.00708
	(0.082)		(0.247)
Education	0.0181		0.0101
	(0.509)		(0.719)
Total Land	0.000384		0.000330
	(0.801)		(0.830)
Percent Forested	0.527		0.404
	(0.170)		(0.299)
Percent Pasture Land	0.710**		0.648*
	(0.006)		(0.013)
Property Ownership	0.625**		0.691**
	(0.005)		(0.002)
Obstacles to Access	0.683**		0.583**
	(0.001)		(0.006)
Number of Rooms in Home	0.251***		0.224***
	(0.000)		(0.000)
Number of Cattle	0.0108		0.0107
	(0.058)		(0.057)
Alternative income	-0.135		-0.201
	(0.453)		(0.271)
Debt	0.456		0.417
	(0.063)		(0.096)
Distrust of Institutions	-0.0265		0.0528
	(0.782)		(0.598)
Environment = Incomes		0.0866	0.0421
		(0.365)	(0.679)
Prioritizes Environment		0.262	0.166
		(0.077)	(0.307)
Views Water as Problem		-0.0532	-0.117
		(0.748)	(0.525)
Generations in Community		0.209**	0.181*
		(0.004)	(0.021)
OTB Membership		0.876***	0.750**
		(0.000)	(0.002)
People Cooperate		0.0674	0.0357
		(0.183)	(0.532)
Constant	-1.278	-2.402**	-2.784*
	(0.216)	(0.006)	(0.015)
Observations	1099	1258	1089

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 1.3: Determinants of Take-up with Interaction Terms for OTB Characteristics

	(1)		(2)
Age	-0.00577	Age	-0.00654
	(0.390)		(0.293)
Education	-0.0103	Education	0.0118
	(0.744)		(0.677)
Total Land	0.0000256	Total Land	0.000187
	(0.986)		(0.901)
Percent Forested	0.446	Percent Forested	0.470
	(0.299)		(0.231)
Percent Pasture Land	0.573*	Percent Pasture Land	0.650*
	(0.031)		(0.014)
Property Ownership	0.694**	Property Ownership	0.689**
	(0.004)		(0.002)
Obstacles to Access	0.564*	Obstacles to Access	0.575**
	(0.011)		(0.007)
Number of Rooms In Home	0.236***	Number of Rooms In Home	0.225***
	(0.000)		(0.000)
Number of Cattle	0.0122*	Number of Cattle	0.0112*
	(0.042)		(0.050)
Alternative income	-0.120	Alternative income	-0.172
	(0.546)		(0.347)
Debt	0.598*	Debt	0.383
	(0.034)		(0.125)
Distrust of Institutions	0.0541	Distrust of Institutions	0.0639
	(0.617)		(0.524)
Environment = Incomes	0.0737	Environment = Incomes	0.0352
	(0.493)		(0.729)
Prioritizes Environment	0.147	Prioritizes Environment	0.161
	(0.400)		(0.323)
Views Water as Problem	-0.188	Views Water as Problem	-0.104
	(0.351)		(0.574)
Generations in Community	0.154	Generations in Community	0.172*
	(0.075)		(0.028)
OTB Membership	1.283***	OTB Membership	0.138
	(0.001)		(0.710)
People Cooperate	0.0689	People Cooperate	0.0381
	(0.268)		(0.508)
OTB Mandatory	1.455	OTB uses Minga/Ayni	-2.172
	(0.234)		(0.071)
OTBMembership* OTBMandatory	-0.549	OTBMembership* OTB uses Minga/Ayni	1.148*
	(0.335)		(0.021)
Observations	953	Observations	1089

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

However, there are several reasons to think that the significance of the OTB variable indicates more than pure information effects. First, the nature of the intervention makes it unlikely that many of the non-adopters were simply unaware of the program. Technicians visited each community eighteen times over the course of three years and the compensations, being in-kind goods, are highly visible. Those living in the community full-time are likely to have heard about the compensations whether they attend OTB meetings or not.

Secondly, the high number of ARA participants who live outside of the village indicates that word did indeed spread beyond those who were present at the informational meetings. Finally, the significance of the number of generations that a family has been in the community (even when controlling for OTB membership) indicates that social embeddedness, apart from pure information effects, plays a role in motivating adoption of the ARA contracts.

In addition to awareness effects, there are two other reasons to believe that OTB participation might have an impact: selection and socialization. Selection refers to the possibility that OTB members are simply different ex ante from non-members. Socialization refers to persuasion occurring as a result of the fact that the information sessions highlighted the role of *ayne*, reciprocity, in these contracts. It could be that this framing of the program made reciprocity more salient for those who were present at the OTB meetings and/or that by being an active member of the OTB reciprocity norms are generally reinforced through social embeddedness.

In order to seek preliminary evidence for these explanations, I include interaction terms between OTB participation by the household and two OTB-level variables: (i) OTB-level requirements to engage in community work through the OTB and (ii) the use of *minga/ayne* at the community level (Table 1.3). First, in some OTBs community work is considered mandatory, and there may even be fines or other forms of punishment for those who do not attend. While we still find that some people don't attend even where it is considered mandatory, this would likely change the nature of who chooses to attend or not. However, the interaction between OTB

membership and whether or not participation is mandatory is not significant. This suggests that selection effects do not play a very large role in explaining the significance of the OTB variable.

However, the interaction term for whether or not the traditional reciprocity institutions, *minga* or *ayne*, are used in a given community is significant and the coefficient is the large relative to others in the model. In those communities where *minga* or *ayne* is still used, the effect of OTB participation is larger. This indicates that the framing used in the informational meetings was more effective in those communities where reciprocity norms are still very active, and thus, a socialization mechanism is likely present. An individual's exposure to social norms plays a role in determining their decision to participate in the ARA program.

1.6 Discussion

Social factors are strong determinants of participation in the ARA scheme. These include participation in the pre-existing participatory decision-making structure in the community, the OTB, as well as the length of time the family has resided in the village. Though the significance of OTB membership is likely due in part to information effects, additional evidence suggests that this does not explain the whole effect.

The fact that the effect of OTB participation is stronger where there is a tradition of *minga/ayne* and weaker where there isn't, seems to support the effect of the reciprocity framing. The fact that the effect of OTB participation is weaker where participation is mandatory and stronger where it is not provides some evidence for the notion that those who willingly choose to be active participants in the OTB differ in some way (perhaps community-mindedness) that also makes them more likely to take up the ARA contracts. The strength of reciprocity norms in the community, as well as the individual household's embeddedness in community institutions, seems to be important to determining take-up, though financial barriers to take-up are of course still prohibitive for many.

Results are suggestive of the fact that Fundación Natura's ARA program is successful at reinforcing social norms at least with respect to participation in the program. It remains to be seen whether the importance of social motivations in take-up will translate to improvements in outcomes later on. It's also not certain that the reinforcement of social motivations alongside the offer of economic compensation will necessarily lead to crowding out rather than in over the long-run. Finally, I cannot attribute these social motivations to specific aspects of the ARA's institutional design in a way that is directly actionable in other contexts.

Previous studies of motivations for participation in compensation schemes tended to focus on financial motivations (whether the size of the financial incentive, or the existence of financial impediments to participation) or environmental motivations. This study suggests that, like other forms of collective action at the community level, the existence of norms and perceived social obligations may be just as important. It is unclear to what extent the framing of ARAs as *ayne*, or the use of in-kind compensations, or the prior existence of cultural reciprocity norms each contributed to this. However, some safe conclusions to draw from this are that an awareness of existing cultural and political institutions in the design of compensation schemes seems wise and can aid in the activation of complementary intrinsic motivations.

1.7 Areas for Future Research

The fact that social motivations and reciprocity norms play a role in motivating participation in compensation programs for environmental conservation has several potential implications for the literature on long-term impact and crowding out of intrinsic motivations. Additional questions to be asked include: Do social motivations also result in higher rates of compliance with the contracts? When material compensations end, are those motivated by social norms less likely to experience crowding out? Does participation in the program itself have an impact on an individual's social or environmental beliefs?

A next step in the research will be to examine data from the (currently ongoing) monitoring of those contracts that have been adopted. In partnership with Natura's research team, I will look at the impact of these same characteristics (relating to financial, social and environmental motivations) on actual compliance with the requirements of the contracts. In addition, Fundación Natura has plans to implement a follow-up survey in all 130 communities in the region – both those where the contracts were offered and those where they were not. This will provide interesting opportunities to assess the overall impact of the compensation scheme on conservation activities, and it will also make it possible to test whether participation in the ARA program itself has an impact on social and environmental beliefs held by individuals. Although I did not find that environmental beliefs were a primary motivation for participation, it may still be the case that participation leads people to identify more strongly with conservation behaviors and/or reciprocity norms. Future research should ask whether successful activation of social norms in take-up will also translate to a strengthening of those same norms through participation.

2. Outcomes of the Process:

Poverty Targeting and Elite Capture in Participatory Planning in Indonesia

ABSTRACT

This study asks to what extent a participatory planning process can avoid elite capture and engage in successful poverty targeting. Participatory planning very often occurs in two stages, and this paper examines such a process in Central Java, Indonesia, in which substantial divergence was observed between the outcomes of these two parts of the process. These divergences are often recognized as an indicator of elite capture, which works directly counter to an oft-stated goal of such participatory processes in the context of international development: improved poverty targeting. I combine data on the voting and budgeting outcomes of the participatory planning process with regional poverty rate data and use multiple regression analysis to test whether poverty rate is a predictor of the geographical targeting of participatory planning. Findings indicate that the process fails to target the poorest areas and may even conversely target the least poor. Results suggest that elite capture may be present, but not through the divergence between voting and budget allocations. Capture in this case appears to occur not through direct manipulation by a small group of governing elites, but rather through a more diffuse pattern of self-interested decision-making.

2.1 Participatory Processes, Poverty Targeting and Elite Capture

Participatory institutions are increasingly popular in the context of both international development (Mansuri & Rao, 2004) and democratic governance (Fung and Wright, 2003). Community-driven development (CDD) has come to dominate development discourse, with the World Bank alone spending billions of dollars on its execution (Mansuri & Rao, 2004). Meanwhile, governments across the globe have adopted participatory planning processes (Goldfrank, 2012; Pateman, 2012; Sintomer et al., 2010), largely in an effort to replicate the success of participatory budgeting in Brazil but often without replicating its actual institutional form (Ganuza & Baiocchi, 2012).

In Indonesia, both community-driven development sponsored by the World Bank and participatory planning in the government took root following the economic crisis and subsequent fall of the Suharto regime. Currently, these processes operate in parallel, but the World Bank's program will soon be absorbed by the national government. The scholarly literature has paid much more attention to the World Bank's participatory programs, but a better understanding of related processes within the government itself may help to anticipate problems associated with this transition.

Participatory institutions are seen as a means to achieve myriad goals including improved sustainability, scalability, responsiveness, service delivery, and citizen capabilities (Mansuri & Rao, 2004; 2007). Often these various motivations are categorized as relating to efficiency (more effective matching of citizen preferences with policy outcomes and presumably, a resultant increase in well-being) and empowerment (enhancing the capacities and influence of otherwise marginalized groups) justifications for participation (Beard et al., 2008; Cleaver, 2001). Arguably related to both of these broader categories of effects, participatory planning in the context of international development often has the stated goal of improving poverty targeting (Alderman, 2002) through the incorporation of local knowledge (Chambers, 1993; Ostrom, Lam & Lee, 1994; Uphoff, 1986; Narayan, 1998).

However, a common critique of participatory institutions is that they are prone to elite capture (Cooke & Kothari, 2001), which undermines both the empowerment and efficiency motivations, and also runs directly counter to the related goal of poverty targeting (Kumar, 2002; Pan & Christiaensen, 2012; Park & Wang, 2010; Platteau, 2004). While poverty targeting implies that project benefits be disproportionately targeted to the neediest populations (a desirable outcome from the perspective of international development goals), elite capture results in the reverse: disproportionate targeting of groups who already wield power.

Participatory planning is susceptible to elite capture, because citizens engaging with the process have differential access to the resources, influence and skills required to be effective within it (Abraham & Platteau, 2002; Fung & Wright, 2003). By some accounts, participatory institutions not only fail to alter existing power relations, but serve to preserve or even exacerbate them (Cleaver, 2001; Mosse, 1995). Scholars also note that over time, non-elites sometimes find their own ways to subvert elite capture (Classen et al., 2008; Long, 2001; Lund & Saito-Jensen, 2013; Saito-Jensen et al., 2010, Scott, 1985). Beard & Dasgupta (2007) suggest that collective action based on homogeneity lends itself to elite capture, whereas collective action based on "diversity, dispersed power and a dynamic social and political process" can effectively prohibit capture by elites.

Previous literature suggests that the extent of elite capture is influenced by a variety of contextual factors, summarized by Pan & Christaensen (2012) as including "political factors such as the local power structure (Bardhan & Mookherjee, 2006) and levels of awareness (Bardhan & Mookherjee, 2000), economic factors such as income level and poverty (Galasso & Ravallion, 2005), sociological factors such as community homogeneity (Seabright, 1996) as well as program design features such the size of the program (Galasso & Ravallion, 2005), the official eligibility criteria and whether the program concerns the distribution of public or private goods (Araujo, Ferreira, Lanjouw & Ozler, 2008)." Fung and Wright (2003) suggest that the extent of

elite capture is influenced by the degree to which elites are over-represented, wield asymmetrical resources, information or influence, and/or have control over agenda-setting.

Participatory planning typically occurs in two phases, both of which are potentially subject to elite capture, but few studies of elite capture examine the planning process as a whole. In this paper, I examine opportunities for elite capture throughout a participatory planning process. In particular, I examine the extent of capture in a participatory planning process in Surakarta, Indonesia, which partially mimics the form of the World Bank's Urban Poverty Project, but is implemented through the national government's Musrenbang consultative planning process. I combine information on the outcomes of the participatory planning process and the geographical location of those projects with poverty rate data to determine whether or not poverty is a significant predictor of targeting of funds through this process. I find that poverty targeting has not occurred, and so I ask at what point in the process did poverty targeting fail and was this a result of elite capture or something else?

2.2 Conceptual Framework

Both the measurement of and policy response to elite capture are complicated by the fact it takes multiple forms. First, elite capture can occur at multiple stages in a given participatory planning process. In addition, the involvement of elites need not result in capture, and capture may be perpetrated by various kinds of elites or even by groups not typically conceived of as elites.

Participatory planning processes are typically characterized by the use of direct democracy to influence or determine government spending. A common form taken by participatory planning institutions involve an open vote process to propose potential projects and establish spending priorities (which I will refer to as "the public phase"), followed by actual spending allocations by a management committee ("the managerial phase").

Elite capture may occur in either the managerial phase, with governing elites ignoring the outcomes of the public phase in favor of their own preferred projects (Fung & Wright, 2003; Gibson & Woolcock, 2008), or in the public phase, when those attending the meetings are not representative of the wider community (Shah, 2007). However, few studies take a comprehensive approach, examining opportunities for capture throughout all phases of the process.

Recent research highlights the importance of a more holistic approach, by recognizing that capture is in fact somewhat fungible across phases of the process – when interventions target one phase, the elite capture may adapt and merely shift to another part of the process (Sheely, 2015). Thus an examination of the various opportunities for capture that are present throughout the process is useful both for developing effective policy responses to elite capture and for a deeper academic understanding of what exactly constitutes capture.

Deviations between the managerial phase and public phase can occur in two ways, including "rejection," where projects prioritized during the public phase do not actually receive funding in the managerial phase, and "insertion," where projects receive funding in the managerial phase despite never having been proposed in the public phase. These each represent opportunities for managers to exercise control over the outcomes of the process in order to serve their own self-interest or the interest of groups that wield power over them.

Table 2.1: Possible Deviations between Public & Managerial Phase Outcomes

	No Discrepancy	**Rejection**	**Insertion**
Public Phase: Project was Proposed & Prioritized in a relatively open process	Yes	Yes	No
Managerial Phase: Project was allocated funding by the management committee when budget was implemented	Yes	No	Yes

However, not all deviations from public outcomes during the managerial phase are indications of elite capture. First, there may be legitimate practical reasons necessitating a

divergence from outcomes of the public process (Beard et al., 2008; Fung & Wright, 2001), which those in charge of the managerial process may then explain to participants (Gibson & Woolcock, 2008). More generally, elite dominance in a participatory process, whether based on technical justifications or not, may not always have negative consequences.

Dasgupta & Beard (2007) draw a distinction between "elite control" and "elite capture", suggesting that elite control of participatory processes need not translate into capture of the outcomes of those processes for their own benefit. In some contexts, elite control in fact results in outcomes that are desirable to the poor (Dasgupta & Beard, 2007; Fritzen, 2007). This could be because of true altruism on the part of elites or because elites benefit in some way from poverty targeting, perhaps through patronage or gratitude. In either case, this form of 'beneficial' elite control may still be problematic from the perspective of empowerment in a broader sense (Fung & Wright, 2001), but it implies that elite control need not undermine effective poverty targeting and delivery of needed services to the poor.

In addition, "capture" can occur by groups other than wealthy elites as we typically conceive of them. Elite power may derive from social, political or economic status (Dasgupta & Beard, 2007), and while these definitions of elites may often overlap, they need not. Even if those in charge of the managerial phase are not themselves elites, they may be subject to influence by narrow interest groups, which may include wealthy elites, but could also include civil society groups, the highly educated, etc. Elites can be conceived of as any group that wields disproportionate power, but this paper focuses on elite status based on wealth, because it is (1) easier to identify and (2) assumed to be correlated with other forms of power in this context.

In addition, the goal of poverty targeting can be thwarted even without capture by narrow interests or small groups of elites as they are typically characterized. A form of "democratic capture" can occur whereby people vote along class interests or simply according to majoritarian preference rather than an informed understanding and careful consideration of where there is greatest need.

Gibson & Woolcock suggest that in participatory processes marginalized groups can engage in "deliberative contestation" to challenge capture by narrow interests (2008). According to democratic theory, deliberation involves "reason-based decision-making," in which participants try to persuade each other of a course of action using reasons that appeal to others, such as fairness, group-mindedness or logic regarding effectiveness (Fung & Wright, 2003). Notably, the deliberative ideal does not require the absence of self-interest, but only that self-interest be constrained by deliberation and that coercive power be absent (Mansbridge et al., 2010).

Table 2.2 below summarizes the potential combinations of capture (of benefits) and control (of the decision process) that could be observed in each of the two main phases of a participatory process. This is a summary of the existing literature as I understand it, and it will guide my analysis of the participatory planning process in Solo.

Table 2.2: Control and Capture in Participatory Processes

	No Capture (Reason-based decision-making)	**Capture (Pure Self-Interest)**
Elite Control	Elites are disproportionately represented or influential but use reason-based decision-making that considers the needs of others **Benevolent Oligarchy**	Elites are disproportionately represented or influential and make decisions purely based on their own self-interest **Elite Capture**
No Elite Control	Participants are representative of population at large, free from coercion and use reason-based decision-making **Deliberative Democracy**	Participants are representative and not coerced, but use purely self-interested decision-making that ignores needs of marginalized groups **Democratic Capture**

When some powerful group (in this case, the wealthy) are disproportionately represented or able to wield disproportionate influence over other participants in a decision-process, I classify this as elite control (the top row in the figure). Only when elite control coincides with decision-making based on pure self-interest does it result in elite capture. When neither control nor capture are present, the participatory process takes on the ideal form of deliberative democracy as described in the democratic theory literature. The expectation in this case is that the distribution of benefits includes a consideration of fairness, and thus some

degree of targeting based on need (though this need not be the sole criteria and others may also receive some benefits).

In both "Benevolent Oligarchy" and "Deliberative Democracy", it is expected that there be some degree of poverty targeting, because the decision criteria considers fairness, equity and greatest need. In addition, if there is not much inequality in the population to begin with, then even with purely self-interested decision-making, there may not be "capture" in the sense of the benefits being directed to certain segments of the population. Similarly, the use of reason-based decision-making could still fail to result in poverty targeting if there is not much inequality. However, this is rarely the case in the context of international development, so I assume some degree of underlying inequality in the broader population.

This table applies equally to the public phase and the managerial phase, but the same process could land in different quadrants in each of the two phases. The participants are different and subject to different degrees of control and capture. Another difference is that in the managerial process, the "reason-based decision-making" is more likely to involve reasons such as technical considerations, since the public phase has presumably already resolved the question of distribution.

In the public phase of the process, a combination of representativeness and reason-based decision-making should result in a distribution of funds that is equitable and recognizes the neediest segments of the population (even if they are a minority). In the managerial phase, however, a combination of representativeness and reason-based decision-making will result in a reflection of whatever priorities were already established in the public phase.

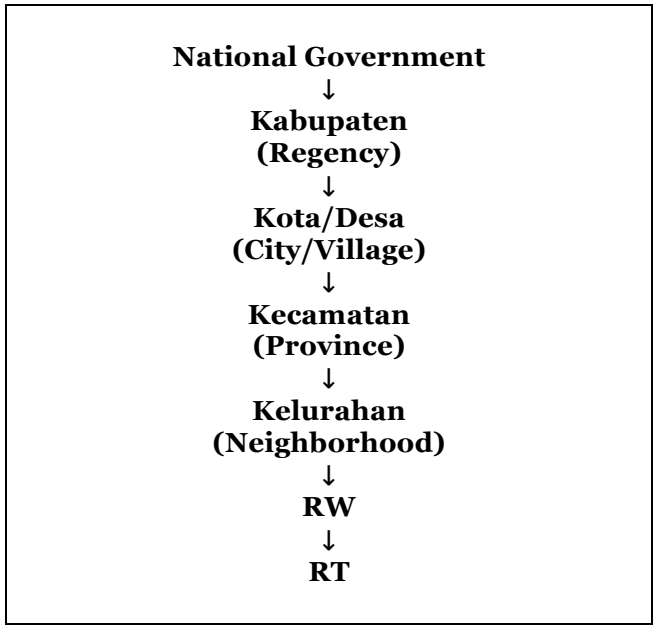
In the following pages I introduce a particular participatory process in Indonesia and then examine its placement in the conceptual framework described above. I assess the degree, form and placement of capture in the process. I ask: Are the benefits of the process outcomes subject to capture? If so, in which phase of the process does the capture occur? What form does that capture take?

2.3 Participatory Institutions in Indonesia

The end of Suharto's regime in 1998 marked the start of Indonesia's *Reformasi,* a period of democratic reform that included a push toward rapid decentralization. Notably, laws 22/1999 and 25/1999 granted local governments both decision-making autonomy and freedom to raise their own revenues (Antlov, 2003). However, the effectiveness of *Reformasi* policies were limited by the continued entrenchment of local elites, who had been mobilized by the Suharto government to facilitate state intervention in the lives of citizens (Antlov, 2003; Hadiz, 2003; Ryter, 2001; Sidel, 2004). This problem may have been mitigated somewhat in urban areas (Beard & Dasgupta, 2007).

Two participatory institutions were born during the *Reformasi* period: (1) the World Bank's Kecamatan Development Program (KDP), along with its urban counterpart the Urban Poverty Project (UPP) and its modern variant, PNPM, and (2) Indonesia's national *Musrenbang* process, a participatory planning institution that is embedded within the government's formal budgeting process.

Figure 2.1: Indonesian Administrative Units



The World Bank's process, under its various names, is a very widely cited participatory program. It provides block grants to sub-units (kecamatans) in Indonesia, allowing this administrative unit to determine its spending. This process is in fact the example cited to support many of the purported benefits of participatory processes, and CDD in particular, described in the previous section. KDP is credited with enhancing the capacity of marginalized groups to challenge governing elites (Gibson & Woolcock, 2008), as well as improving conflict

resolution more generally (Barron et al., 2006). UPP's poverty targeting is viewed as largely successful in spite of widespread elite control of the process (Dasgupta & Beard, 1997, Fritzen, 2007). Less attention is paid to a parallel participatory process implemented by the Indonesian government itself.

One result of *Reformasi* was the empowerment of cities to innovate with respect to local policy (Guggenheim, 2006; Raza et al., 2006). In the city of Surakarta (Solo) in Central Java, this resulted in the piloting of a participatory planning process that began in 2000 and was expanded to the whole city in 2001 (Solo Kota Kita, 2012).

In 2004, the national government mandated that related *Musrenbang* process be implemented in every region of the country. The national *Musrenbang* ("Musyawarah Perencanaan Pembangunan" - public forum for development planning) is merely a non-binding consultation process that shares citizens' preferences with policy-makers, but doesn't mandate that policy-makers directly address those preferences in finalizing government agency budgets. As a result, the *Musrenbang* process exhibits very little impact on actual outcomes (Blair, 2010; Kristiansen et al., 2009)

However, Solo's *Musrenbang* includes an additional component, called the Kelurahan Block Grant (DPK), through which a discretionary fund is devolved directly to the kelurahan sub-unit (which is the administrative unit just below the kecamatan – See Figure 2.1). Solo's Kelurahan Grant (DPK) process functions similarly to KDP/UPP but is directly incorporated into the *Musrenbang* process that is part of the government's formal budgeting procedure. In Solo, proposals for projects are collected at the RT and RW levels, and they are divided into five sectoral categories (Infrastructure, Economic, Governance, Social-Cultural and Operational). Elected representatives from each RW attend the Kelurahan-level Musrenbang process to prioritize those proposals. During this "public phase" of the process, the RW representatives are meant to prioritize the DPK projects according to a basic needs indicator as per the instructions of BAPPEDA, Indonesia's planning agency.

About a year later, the DPK grant funding actually arrives, and at this point a DPK management committee (elected during the Kelurahan-level Musrenbang meeting the previous year) is in charge of allocating the funding to the previously prioritized projects. Those in charge of this "managerial phase" appear to have substantial discretion to make necessary changes to the list of priorities, but are expected to justify any changes in their DPK implementation report to BAPPEDA.

Yayasan Kota Kita (YKK) is a local NGO dedicated to enhancing transparency in local government. According to NGO officials, the DPK process is characterized by rather large discrepancies between the outcomes of the public and managerial phases of the process. As a result of these discrepancies, understood by the NGO as evidence of corruption within the system, YKK partnered with BAPPEDA (the agency in charge of the DPK) to begin digitizing records of the DPK grant process as a way to enhance transparency and improve the functioning of the process. According to YKK officials, BAPPEDA had also begun to request stricter documentation starting in 2011, in response to the perceived high degree of managerial interference. The number of inserted projects being funded did decline after that, but they continue to account for a substantial percentage of executed projects.

Indeed, an initial review of the newly digitized records reveals rather large discrepancies between outcomes of the public and managerial phases of the process. This takes the form both of rejection (projects that appear as "voted" in the public outcomes but fail to receive funding in the managerial phase) and insertion (projects that are funded by the management team despite not having appeared in that year's public process). Over the full period of this study (2011-2014), only 40.27% of the executed projects listed on the DPK Implementation Plans appear among the lists of priorities that emerged from the Musrenbang –Kel discussions (See Table 2.3). With respect to actual dollar amounts, only about 57% of the final budget went to projects that had emerged from the formal consultation process. The implementation committee therefore has substantial power to make changes to the decisions made during the Musrenbang process.

Table 2.3: Descriptive Stats comparing outcomes of Public & Managerial Phases

Year	Total Voted Projects (Public Outcomes)	Percent of Public Outcomes not funded (Rejected)	Total Funded Projects (Managerial Outcomes)	Percent of Managerial Outcomes from Public Phase	Percent of Projects Inserted in Managerial Phase
2011	838	81.03	333	47.75	52.25
2012	767	78.36	289	57.44	42.56
2013	903	77.85	304	65.79	34.21
2014	860	78.60	261	70.50	29.50
All Years	3368	78.95	1187	40.27	59.73

Thus, the Kelurahan Grant process exhibits a very large degree of managerial interference. While it is unclear whether members of the management committee are necessarily wealthy elites, it is clear that the management committee has substantial discretion to make changes to the public prioritization. Even if the implementation committee itself is not stacked with elites, the more closed-off nature of the managerial process makes it more open to potential influence by narrower interest groups. However, this influence could potentially be wielded by civil society groups just as well as by wealthy elites, and as described earlier, the managerial interference revealed by these discrepancies need not result in elite capture – studies of the UPP showed that poverty targeting sometimes occurred despite elite control of the process.

The goal of this study is to evaluate the degree of elite capture and/or poverty targeting in the DPK Kelurahan Grant process, which operates in the same setting as the UPP but with some distinct institutional features.

2.4 Methodology and Data Sources

This study examines the degree of poverty targeting or elite capture in the Kelurahan Grant Process. It posits that if poverty targeting has occurred, then the poverty rate should be a significant and positive predictor of the placement of funded projects. On the other hand, if elite capture has occurred, then income (for which I proxy using the inverse of the poverty rate here) should be a significant predictor of the location of funded projects. If neither elite capture nor

poverty targeting has occurred, then other factors should outweigh the poverty rate in determining the placement of projects. These questions were examined with respect to the outcomes of both the public phase and managerial phase of the process.

The main source of data for this study is a digitized version of records from the Musrenbang process pertaining to the infrastructure category of the Kelurahan Grant process, from the years 2011-2014 for all 51 neighborhoods in Solo. Across the four years of this study, infrastructure accounted for, on average, between 23.4 and 36.4% of all DPK spending, and was in all four years either the first or (in only one case) the second largest spending category city-wide. However, this varies significantly across kelurahans, with for example, two kelurahans not allocating any money at all to infrastructure in the year 2014. (Analyses were repeated excluding those kelurahans that spent less than 5% on infrastructure and this did not substantially alter the results.)

In addition to the digitized DPK priority lists (outcomes of the public phase of the process), I also use digitized versions of the DPK implementation reports (outcomes of the managerial phase). This information was provided by the Indonesian planning agency (BAPPEDA) in charge of the process and then digitized by a local NGO, Yayasan Kota Kita (YKK), which is dedicated to improving transparency in government. I combine this data with RW-level data on poverty rate and number of households, which was previously collected by YKK in the year 2010.

At my suggestion and under my guidance, YKK also collected a brief survey of Musrenbang participants (2 male and 2 female participants from each of the 51 neighborhoods in Solo), and conducted in-depth interviews with members of the management committee in six neighborhoods, selected to represent a stratified sample of kelurahans based on the percentage of discrepancies observed in the DPK process. This qualitative data was collected in early 2015.

Analysis of the quantitative data employs multiple regression analysis, and qualitative data is used to corroborate or clarify findings of the quantitative analysis. The quantitative analysis proceeds in three stages, corresponding to 3 distinct units of analysis made possible by the existing data.

First, I assess the degree of capture in the geographical distribution of project outcomes. I examine the project location (RW) organized by poverty quintile as the unit of analysis (Table 2.4). I aggregate voted and funded projects and their corresponding budgets to the RW-level (the administrative unit just below the kelurahan – Refer back to Figure 2.1). Projects that serviced the entire kelurahan were dropped from the analysis, as were projects for which the location was not recorded, as they provide no information regarding targeting. (These accounted for approximately 5% of projects in the database.) I then calculate de-meaned versions of the RW-level indicators (poverty rate and population) so that RWs can be compared to others in their own kelurahan (the site of the decision-making process). Because kelurahans do not have the same number of RWs, the RW-level analysis would be biased toward larger kelurahans. To correct for this, the analysis using location as unit of analysis was run after grouping RWs into poverty quintiles within their respective kelurahans. I regress the percentage of the planned budget (determined by the public process) and the executed budget (determined by the managerial process) on these RW-level indicators using kelurahan-level fixed effects. All regressions included kelurahan fixed effects.

All RW characteristics are from the year 2010 (the year prior to the first year of data from the process outcomes) in order to mitigate concerns over reverse causality. In addition, I ran regressions using the change in RW characteristics from 2010 to 2012 as dependent variables with kelurahan grant spending in 2011 as explanatory variable. There was no statistically significant effect of DPK spending on the change in poverty rate (See Appendix 2.1).

Next, using the full database of projects proposed and funded, I look for evidence that the discrepancies between the public and managerial phases are geographically biased and

correlated with poverty (Table 2.6). I run a logit regression assessing the determinants of funding (for the subset of "voted projects" that have been proposed and prioritized during the public phase) and the determinants of insertion (for the subset of "funded" projects that were reported as executed by the management committee). Also using the project as unit of analysis, I use linear regression to determine the actual budget allocations in these same two cases (funding conditional on voting and insertion conditional on funding). This project-level analysis allows me to assess the decision-making criteria used by the management committee, but doesn't give me much information about how it compares to the decision-making in the public process (since it excludes those subunits that never received any project proposals at all). I also examine the in-depth interview data for reasons given by management committee members to explain the discrepancies between the public and managerial phases (Table 2.5).

To further establish the existence or not of capture in the managerial process, I also aggregate the data to the kelurahan level, create indicators of both managerial interference and elite capture, and test them for correlation (Table 2.7). In order to measure the degree of managerial interference in each kelurahan, I created a statistic that represents the percentage of the final funding that was allocated to inserted projects – that is, projects that did not arise through the public process. This statistic demonstrates the degree to which changes have been made between the public and managerial processes. I also create a statistic to test for elite capture, that is, the degree to which project resources have been diverted to wealthier (or at the very least, less poor) areas. To do so, I created a statistic that represents the percentage of the executed budget in each kelurahan that is apportioned to RWs at or below the mean poverty rate within the kelurahan.

Finally, I turn to a survey taken of Musrenbang participants in which their RW and RT of origin is recorded. I combine this information with the poverty rate information in order to gain a preliminary sense of how representative the process was of poorer regions.

2.5 Findings

Capture of Benefits

Using the RW poverty quintile as the unit of analysis, I find that the poverty rate quintile is inversely correlated with funding and this finding is statistically significant even when controlling for the percent of the population that lives within each quintile (Table 2.4). A lack of significance altogether would be enough to conclude that poverty targeting has not occurred, but the fact that poverty is significant in the opposite direction is suggestive of capture in some form.

Table 2.4: Budget allocations by RW Poverty Rate Quintiles

	(1) Percent of Voted Projects	(2) Percent of Voted Budget	(3) Percent of Funded Projects	(4) Percent of Actual Funding	(5) Percent Change Voted/Final Budget
RW Poverty (by Quintile)	-0.108*	-0.174***	-0.151*	-0.206***	-0.00695
	(0.0485)	(0.0439)	(0.0650)	(0.0600)	(0.0100)
Population (% Kelurahan)	1.471***	1.466***	1.235**	1.022*	-0.0461
	(0.303)	(0.292)	(0.418)	(0.448)	(0.0685)
YEAR	-0.0182	0.162*	0.0149	0.0606	-0.00488
	(0.0749)	(0.0639)	(0.0906)	(0.0872)	(0.0142)
Constant	34.31	-329.6*	-32.00	-123.3	9.656
	(150.6)	(128.5)	(182.4)	(175.4)	(28.50)
Observations	248	248	248	248	248

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The outcomes of the process not only do not target the poorest areas, but actually target the least poor areas. Across all 4 years and all 51 kelurahans, 12.57% of the budget was spent in RWs that belong to the least poor quintile in their respective kelurahans, compared with 6.66% spent in the poorest quintile. This indicates that there is indeed 'capture' in the distribution of project benefits. Because non-poor is not equivalent to being wealthy, I cannot conclude that there is elite capture occurring necessarily, but since poverty rate is significant even when controlling for population, this is also not merely a result of voter prioritizing broader impact over greatest need.

This is true of both the final outcomes as allocated by the management committee (columns 3 & 4) and the outcomes that resulted from the public phase (columns 1 & 2). However, the significance is absent with respect to the actual discrepancies between the two (column 5). This implies that the capture may have occurred in the public phase only, and that managerial outcomes merely reflect the decisions taken during the public phase. The large degree of managerial interference that has been observed in the process may in fact have been based on legitimate technical reasons (or at least not based on a desire to re-direct funding to wealthy elites).

Table 2.5: Interviewees explain Discrepancies between Public & Managerial Processes

Emergencies	"Yes, there is a possibility where project might appear when there was emergency or force major. For example, when the Kelud Mountain erupted, there was some drainage clogged. The community decided to use DPK money to solve the problem. " – Female, Kemlayan "[Inserted] project usually appear in DPK Budget Plan if there are urgent problem to be resolved such as natural disaster, epidemic of disease, etc and it must be consulted to all Kelurahan stakeholders and approved by Bappeda and Setda" -Male, Sewu
Alternate Sources of Funding	"It is not ghost project actually, it just reallocation or readjustment project. For example, there was a case an RW proposed road improvement, later when the money come, we know that the road was no longer broken, so we re-allocate the project or change the project, with acknowledgment from evaluation team and Bappeda." –Male, Mansur "The level of voluntary in infrastructure projects in Kadipiro is still high, many infrastructure problems were solved by the community funding, rather than waiting for DPK or PNPM." – Female, Kadipiro
Technical Difficulties	"We sometime have to cancel some projects due to technical or nontechnical problem. As I explained such as drainage under the house, where we have limitation to go into the house and make improvement." – Female, Kemlayan "There was an example of deleting project in Kadipiro in 2010, the making of … building… but when it was about to be built, the land status was questioned, and finally it was known that it belongs to individual. So the project cannot be proceeded. But we have made the minutes of cancelation and reported to Bappeda." -Female, Kadipiro

Phase of the Process

In qualitative interviews, members of the management committee provided several plausible explanations for discrepancies between the Public and Managerial phases of the process (Table 2.5). While I cannot directly corroborate any of these explanations with the current data, regression analysis at least does not directly contradict any of these explanations.

Indeed, the project-level regressions seem to support this as well (Table 2.6). They demonstrate that the key determinants of whether or not a voted project receives funding from the management committee are: how highly it was prioritized in the public phase of the process, and what kind of project it is (with preference given to both drainage and roads projects, which make up the largest percentage of the proposed projects to begin with). RW characteristics such as the poverty rate and population have no statistically significant effect.

The only significant predictor of insertion in this model is the year of execution. The decrease in insertion over time may be due to BAPPEDA's stricter reporting requirements. So, while there is no evidence of elite capture in the managerial phase of the process for the years covered by this data, it is possible that capture used to occur in the managerial phase and moved to the public phase in response to stricter reporting guidelines. However, the significance of the year may also reflect, for example, fewer emergency situations occurring over time as infrastructure generally improves. I do not have access to previous years' records nor to data on natural disasters in order to distinguish between these explanations, but that could be an interesting area for future research.

Finally, when I examine the relationship between managerial interference and elite capture at the kelurahan level, I find that there is in fact an inverse relationship between the two. In kelurahans where the management committee interferes more, there is actually less elite capture, on average. This provides fairly strong evidence that there is no elite capture occurring in the managerial phase during the years studied here.

Table 2.6: Project-level determinants of Execution and Budget allocations

	Voted Projects:		Executed Projects:	
	(1) Is it funded?	(2) Executed Budget	(3) Inserted project?	(4) Executed Budget
Priority	-0.0188***	-35655.1**		
	(0.00383)	(11958.7)		
Proposed Budget	-7.68e-10	-0.0000739		
	(1.37e-09)	(0.0000449)		
Drainage Project	0.662***	-749154.2	-0.150	6640171.2
	(0.145)	(1272398.0)	(0.234)	(9449250.7)
Road Project	0.557***	892918.6	0.0943	7242339.4
	(0.151)	(1358068.0)	(0.258)	(6795082.8)
YEAR	0.0120	-92030.4	-0.568***	1240945.5
	(0.0497)	(201056.0)	(0.0792)	(1309756.7)
RW Poverty	-0.0248	115985.8	0.0375	175262.0
	(0.0421)	(364858.6)	(0.0651)	(1141193.7)
RW Private WCs	0.000847	1400.2	0.00213	-138211.2
	(0.00395)	(23113.8)	(0.00595)	(130301.5)
RW Population	0.221	-114225.1	2.477	13913782.1
	(1.817)	(15958667.1)	(3.132)	(54943719.1)
Constant	-25.35	185870346.1	1141.7***	-2.47517e+09
	(100.1)	(404757640.3)	(159.2)	(2.63402e+09)
Observations	2645	2830	909	1011
Model Type	Logit	OLS	Logit	OLS

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 2.7: Relationship between Elite Capture & Managerial Interference across Kelurahans

	(1)	(2)	(3)
Managerial Interference	-0.460*	-0.448*	-0.455*
	(0.198)	(0.200)	(0.201)
Year		0.0304	0.0337
		(0.0721)	(0.0723)
Infrastructure Spending			-0.700
			(0.520)
Constant	0.152	-61.11	-67.58
	(0.111)	(145.2)	(145.6)
Observations	183	183	183

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

While I don't have direct evidence on the wealth of members of the management committee, it seems likely that they are 'elite' in some regard – in the sense that they serve as leaders within this process. I consider it highly likely that "benevolent oligarchy" is occurring in the management phase (though I cannot rule out "deliberative democracy"). The quantitative analysis is consistent with relatively benign elite control: governing elites on the management committee do interfere with outcomes but not necessarily in ways that benefit the wealthy or directly interfere with poverty targeting. Of course, it is still possible that benefits are somehow captured by other types of elite status which do not correlate with wealth. Still, I find no evidence that discrepancies introduced by the managerial process are based on something other than legitimate technical considerations.

Capture by Whom?

It seems clear that capture is occurring during the public phase of the process, but that still leaves the question of who, exactly, is doing the capturing. It's important to note that poverty rate is a perfectly appropriate indicator for assessing the extent of poverty targeting, but its inverse is only a very rough proxy for wealth or the existence of elites. What regression analyses thus far have shown for sure is that benefits are captured by the non-poor.

Returning to Table 2.4, the high significance of population in determining the geographical distribution of projects could be consistent with self-interested but representative voting (democratic capture). However, the fact that poverty quintile is significant even when controlling for population suggests that perhaps some degree of elite capture is also present. It is not simply the case that the poorest areas are also the least populated.

In the survey of participants conducted by YKK, income data was not collected. However, respondents were asked to name the RT and RW where they live. According to the rules of the process, there must be a representative from each RW, so it is safe to assume that the RWs are evenly represented by poverty quintile. However, the survey data indicates that within each

respondent's RW, they were more likely to come from one of the least poor RTs in their respective RWs. Out of 192 respondents who shared their location, 31.25% came from an RT in the least poor quintile in their RW. Only 7.81% came from the poorest quintile in their RW.

I cannot guarantee that the survey respondents are perfectly representative of the Musrenbang participants more generally, because an opportunistic rather than random sampling strategy was used. (Surveyors simply went to meetings to see who was available to be surveyed.) However, bias introduced by the sampling method is likely to skew toward the more active participants in the process. Thus it may indicate disproportionate influence if not disproportionate representation in the process. However, once again it is important to note that a low poverty rate only tells us that there are higher numbers of non-poor, not necessarily wealthy elites. Thus it is not clear whether this is a case of wealthy elites manipulating the process for their own benefit, or rather a non-poor, non-elite majority voting along class lines. I cannot conclusively distinguish between elite capture and democratic capture in this context.

2.6 Discussion

Despite a high degree of interference by the management committee, I find no evidence of capture during the managerial phase of the DPK process. In fact, there is some preliminary evidence suggestive of managerial interference mitigating the degree of capture in the results of the public phase. In the public phase, it is clear that poverty targeting is absent and that benefits are captured by a non-poor group. It also appears that there are lower levels of participation on the part of the poorest.

In the public phase, the ability to submit proposals is, at least theoretically, open to the entire public, and the Musrenbang participants are explicitly mandated to be representative of all RWs within each kelurahan. Bearing this in mind, it seems that this is not an example of elite capture as typically conceived – a small group of elites making decisions behind closed doors – but rather something more diffuse.

I see three possible sources of this capture: (1) wealthy elites in various parts of a kelurahan use their power to explicitly limit the participation of the poor in order to wield greater influence themselves, (2) a non-poor, non-elite majority votes according to self-interest, resulting in fewer benefits delivered to the poor, and the poor exit the process as a result, or (3) the poor, having limited resources and time, choose not to participate in this process and engage in deliberative contestation because other investments of their time yield higher perceived returns compared with the lengthy, bureaucratic nature of this process.

These findings may be relevant to scholars studying social structures in Indonesia. Explanation 1 is consistent with Sidel's description of elites in Indonesia as a "decidedly looser, more nebulous and less monolithic pattern of local networks, 'mafias' and 'clans,'" and explanations 2 and 3 are consistent with his characterization of Indonesian culture as featuring "strong community, class, ethnic and religious identities" (2004).

The results of this study also contribute to prior literature problematizing our understanding of elite capture. It confirms Dasgupta and Beard's findings that (1) elite control does not always result in elite capture of benefits, and that (2) public, "democratic" processes can in fact result in worse poverty targeting than those characterized by elite control (2007). However, whereas Dasgupta and Beard find that the World Bank's UPP is generally successful at targeting the poor despite elite control, I find that the DPK is mostly unsuccessful at targeting the poor and is subject to capture, despite no obvious control of the process by wealthy elites. Because the UPP's modern successor (PNPM) and the DPK operate simultaneously in the same context, this raises several questions for possible future research.

2.7 Areas for Further Research

The fact that PNPM and DPK operate simultaneously in the same context provides an interesting opportunity for direct comparison between outcomes of the two in the same places over the same years. Because PNPM has a shorter time horizon between proposal and funding,

the poor may choose to submit proposals there instead of to the Kelurahan Grant, thus allowing the non-poor to capture the benefits of the Kelurahan Grant. With data from the PNPM process over the same time horizon, it would be possible to test for this crowding out.

If the lack of poverty targeting in DPK is directly correlated with successful poverty targeting in PNPM, this raises some questions about the implications of continuing to run two parallel participatory processes, one of which is embedded in the bureaucratic machinery of the government, and one of which circumvents it. If the outcomes of the two processes are not related in that way, then it is worth studying which institutional design factors help account for the difference in targeting outcomes between the two.

Some other areas for future research arise from the limitations of this study. For example, only the DPK data on infrastructure was available at the time of analysis. Kelurahan level regressions included a control for the proportion of the budget spent on infrastructure, and lower level regressions were repeated after excluding those kelurahans with very low levels of infrastructure spending, with no impact on the key results. That said, a future study should seek to obtain digital records of the full DPK records system and repeat this analysis to find out whether the patterns witnessed here are similar across all categories of spending or if capture is more or less likely depending on the type of outcomes in question.

In addition, my findings addressed the degree of capture and poverty targeting across the entire process. However, this analysis obscures substantial variation across kelurahans. If I examine the degree of managerial control (conceptualized as the percentage of the executed budget that went to projects not suggested by the public process) and the degree of elite capture (conceptualized as the percentage of the executed budget that went to RWs at or below the mean poverty rate in their kelurahans), I find substantial variation across kelurahans on both measures. The degree of managerial control varies from 0 in Kedung Lumbu to 1 in Kratonan. The degree of elite capture (which could also be described as a failure to target the poor) varies from 0 in Sudiroprajan to 0.8 in Kepatihan Kulon. Future research should seek to combine this

data with statistics regarding kelurahan level characteristics to see what factors predict the degree of elite control and elite capture, and how these interact with each other across the study area.

3. Effects on Participants:

Gender Inequality and the Multi-dimensionality of Power in Northern Kenya

ABSTRACT

This study evaluates the impact on women's empowerment of interventions intended to increase women's participation in governance. It assesses the impact of an NGO intervention in northern Kenya's pastoralist communities, which aimed to increase women's political participation, but was implemented through an existing financial empowerment program. It asks whether this intervention successfully brings about women's empowerment (understood as a process by which power is increased). I first discuss a conceptual framework that identifies various dimensions of power. I then take advantage of a pre- and post-intervention survey conducted in both a treatment and control group, and I employ a difference-in-difference analysis to assess the impact of the intervention on different dimensions of power. Although the intervention was designed primarily with women's political participation in the community and government in mind, most of the results are concentrated at the household level. While women's participation in community-level decision-making increases, it is not necessarily influential or effective. Understood in the context of previous research on women's empowerment, results suggest several areas for future research, such as evaluating the importance of engaging with those already in power when attempting to give voice to marginalized groups, and testing for dynamic interactions between different dimensions and scales of empowerment.

3.1 Introduction

Gender inequality remains a major challenge throughout the world. While much progress has been made, gender gaps are particularly persistent in contexts where they coincide with poverty and other forms of marginalization (World Bank, 2012). As a result, there has been significant interest recently in the empirical relationship between women's economic and political empowerment (Duflo, 2012).

Empowerment occurs when power is increased, and political theorists have long acknowledged that power itself is multi-dimensional in nature (Lukes, 1974). Yet empirical studies on empowerment rarely engage directly with this conceptual literature on power. Implicitly, however, empiricists acknowledge that empowerment comes in different forms and have begun to assess their relationship to each other. A review of studies on the relationship between women's economic and political empowerment suggests that more comprehensive policies are necessary, addressing multiple aspects of power simultaneously (Duflo, 2012).

This study examines such an intervention. An NGO that had already provided business training for women decided to implement a complementary program focusing on women's political empowerment. The NGO hoped that it would succeed where others had failed because it combined multiple efforts intended to address different dimensions of power. In addition, NGO staff believed that its prior economic empowerment work might have left women already more well-prepared to benefit from additional programming, and that by engaging directly with men in addition to women, it would avoid any potential backlash that could arise from challenging the status quo.

Results confirm previous findings that in a context of extreme inequality, short-term interventions are unlikely to yield major gains with respect to government involvement. Although the intervention was designed primarily with women's political participation in the community and government in mind, most of the results are concentrated at the household level. The present study cannot definitively distinguish among various causal mechanisms that

could explain these results, but taken in light of previous research, they indicate the importance of engaging with those already in power when attempting to give voice to marginalized groups, and testing for dynamic interactions between different dimensions and scales of empowerment.

3.2 Gender Inequality

Political participation is one observable indicator of political empowerment. The gender gap in civic and political participation has been well documented (Verba et al., 1993), and it is particularly large in Africa (Isaksson et al., 2014). Since gender gaps are particularly pervasive in contexts of extreme poverty (World Bank, 2012), women's economic and political marginalization are viewed as potentially reinforcing one another. As a result, there has recently been significant interest in the relationship between women's economic and political empowerment, with much of this literature focusing on whether increasing economic development leads automatically to increases in political power for women, or vice versa. For example, increased access to decision-making spaces for women may result in policies that in turn enhance economic outcomes. On the other hand, increased economic power for women may increase their status in society or give them access to the necessary resources to make them more able to gain access to decision-making spaces.

A significant amount of research has been conducted on women's political participation in India, where the literature suggests that the gender of politicians does in fact change policy outcomes (Chattopadhyay & Duflo, 2004; Clots-Figueras, 2011; 2012) indicating one mechanism through which political empowerment is likely to influence other dimensions of power. Both men and women are less likely to report satisfaction with female leaders (Duflo & Topalova, 2004), and it is gender-based prejudice, rather than actual performance, which drives these lower levels of satisfaction (Beaman et al., 2009). Bias against women leaders is also corroborated by laboratory experiments (Eagly & Karau, 2002). This is further confirmed by the fact that increased exposure to female leaders has the long-term effect of overturning these false

beliefs about women's competence and of increasing acceptance of female politicians (Bhavnani, 2009).

In Africa, increases in female leadership were also associated with an increase in other forms of political participation by women (Barnes & Burchard, 2013). However, in highly patriarchal cultures and in the absence of formal quotas, discriminatory gender norms have been difficult to overturn. A program that increased gender representation in community-level decision-making Afghanistan did increase political participation and even incomes, but failed to influence intra-family decision-making or societal attitudes toward women (Beath et al., 2013). Business training benefited Hindu women of all castes, but not Muslim women who face higher social restrictions (Field et al., 2010). In Mali, an increase in civic education was insufficient to overcome a gender gap in political participation and may have exacerbated it (Gottlieb, 2014).

Duflo (2012) reviews the literature on economic and political empowerment and concludes that neither is sufficient to initiate the other. She concludes that more comprehensive policies are necessary that address both economic and political dimensions of empowerment simultaneously. Political empowerment does not immediately trickle down to improve intra-household distribution of resources, nor does financial empowerment automatically trickle up to increase numbers of women taking on political leadership roles. But it is perhaps true that economic empowerment leaves women more well-prepared to take advantage of opportunities for political empowerment when they arise, or vice-versa.

While political theorists have long acknowledged the multi-dimensional nature of power and empowerment, empirical studies of empowerment have more often focused on monolithic interventions intended to influence one particular aspect of power. More recently, there has been a surge of interest in the effect of women's economic empowerment on political empowerment (and vice versa) in contexts of extreme gender inequality. Prior research demonstrates that interventions geared at one form of exclusion without heeding gender differences can have the unintended consequence of increasing gender inequality (Gottlieb,

2014). Meanwhile, interventions that focus on gender empowerment in one sphere are typically insufficient to spur gains in other areas (Beath et al., 2013; Duflo, 2012).

However, less attention has been paid to interactions between different dimensions of empowerment. Few studies acknowledge all dimensions of power, and few examine interventions which target multiple dimensions of empowerment at once.

3.3 Conceptual Framework: The Multi-Dimensionality of Power

I understand power as analogous to Sen's capabilities: individuals' abilities to direct their own lives (1999). If power is understood as this ability, then empowerment is a process by which that ability is expanded. Kabeer defines empowerment as "the process by which those who have been denied the ability to make strategic life choices acquire such an ability" (1999).

An empirical evaluation of empowerment in practice (i.e. assessing whether or not an individual's power has increased) is complicated by several factors: (1) Power itself is multidimensional; (2) Power can be exercised at multiple levels of governance; (3) Power itself is not observable, but uses of it are; and (4) Power has both relational and absolute components.

Dimensions of Power

A long-standing tradition in political theory suggests that power is multidimensional (Lukes, 1974, Gaventa, 1982), but rarely are these theories explicitly applied to empirical studies. While many scholars have recognized the existence of distinct dimensions of power and empowerment (Gaventa 2006; Kabeer, 1999; Narayan, 2005;), I draw primarily here on Friedman's (1992) understanding of various types of power, which was expressly developed for application to the pursuit of empowerment in international development and which lends itself well to potential measurement.

Friedman asserts that power has social, political and psychological dimensions. Social power is defined as access to various tangible and intangible resources, including information,

knowledge and skills, social networks and social organization, and material and economic resources. These can perhaps be thought of as human/knowledge capital, social capital and economic/material capital. Political power is defined as access to decision-making spaces, and psychological power is defined as "an individual sense of potency" (Friedman, 1992).

A lack of any one of these dimensions of power could theoretically inhibit one's ability to direct one's own life. For example, political power without social power could mean that one has formal access to decision-making spaces, but lacks the resources to be influential within them. Social power in the absence of psychological power could mean that one fails to recognize the resources available and is therefore incapable of making use of them (Diener & Biswas-Diener, 2005). Psychological power without political power could mean that one feels capable of making positive change but is prevented from doing so. However, it is also possible that an increase in one dimension of empowerment could have implications for others. For example, an increase in social power (perhaps through gaining more education) could improve one's psychological power and lead one to demand greater political power.

These potential interactions across dimensions of power remain under-studied. Often, studies of empowerment focus on a particular dimension of empowerment and, if they examine effects on other dimensions, do so only implicitly. Economic resources are the most commonly studied aspect of power, and psychological dimensions of power are particularly understudied in the empirical literature (Narayan, 2005).

Levels of Governance

In addition, scholars have observed that power can be exercised at multiple levels (Gaventa, 2006; Narayan, 2005), and thus empowerment can also take place across scales. In the context of international development, I liken these to different levels of governance or units of decision-making. These levels of governance are nested within each other, further complicating matters. For example, consider the case of political power (access to decision-making spaces). In some societies, women lack the ability to make decisions even within their

home. While men typically enjoy this ability, they may still lack access to collective decision-making spaces at the community level. Even those who do have this access, however, may lack power if those community-level decision-making spaces themselves are relatively impotent with respect to broader governance structures. Similarly, with respect to social power, the resources that an individual has access to within their household is constrained by the resources held by that household, which is in turn constrained by the resources available in the wider context of its community, county and national government.

The various dimensions of power can be exercised across different levels of governance, but they are conceived of here from the perspective of an individual embedded within those levels (not as characteristics of the levels themselves). For example, political and psychological power refer, respectively, to an individual's access to and beliefs about each of the three levels. Social power (access to resources), while conceived at the individual level, is constrained by the availability of those resources within the context in which an individual lives. For the purpose of measurability, however, it may be sufficient to consider total resources available to an individual. Table 1 depicts Friedman's three dimensions of power, exercised across three commonly studied levels of governance (though depending on the context, there may be more).

Table 3.1: Dimensions of Power across Levels of Governance

Levels of Governance/ Dimensions of Power	**Household Level**	**Community Level**	**County/Government Level**
Psychological Power: Beliefs in Abilities	Individual's belief in their own abilities (Self-Efficacy)	Individuals' beliefs in their capacity to work together as a group (Collective Efficacy)	Individuals' beliefs in their capacity to influence government (Political Efficacy)
Social Power: Access to Resources	Access to Human, Social & Financial Capital within the household	Access to Human, Social & Financial Capital within the community	Access to Human, Social & Financial Capital at the Government Level
Political Power: Access to Decision Spaces	Access to Influence in Intra-household decision-making	Access to Influence in community decision-making	Access to Influence in government decision-making

Observable Outcomes of Empowerment

While power as a primary concept involves access to resources that confer ability to make direct one's own life, access and ability are very difficult to measure unless they are actually used. Thus in applying this framework to an empirical setting, as will be done in the remainder of this paper, I approximate the cells in this matrix with measurable indicators. Rather than access to resources, researchers may measure the degree to which individuals actually have the resources in question. For example, trust is an appropriate aggregate measure of social capital, because social capital, when effectively used, results in trust among individuals (Dasgupta, 2011; Morrone et al., 2009). Rather than access to decision-making spaces, actual participation in these spaces may be observed. For example, participation in government decision-making may take the form of voting, lobbying or directly petitioning the government for services. Rather than overall ability to affect change (presumably the cumulative effect of all cells in this matrix being filled), researchers may measure observable actions taken at each level that result in such change.

Friedman's characterization of different sources of power overlaps somewhat with Kabeer's depiction of inter-related dimensions of empowerment, which includes "resources" (similar to Friedman's "social power"), "agency" (which Kabeer defines as processes of decision-making, related to Friedman's "political power") and "achievements (well-being outcomes)" (1999). This last is an important addition to the framework, because actions taken in pursuit of increased well-being are more observable and conclusive than individual forms of power.

Although I adopt the capabilities approach, which views empowerment as increasing the ability to direct one's life whether or not any visible change occurs as a result, I also assume that in a context of extreme poverty, at least some actions will be taken as a result of empowerment. While empowerment may hold value whether exercised or not, observation of it being put to use is the only certain way to empirically demonstrate that it exists. Table 2 presents a slightly

altered version of the framework above, which refers to measurable indicators, rather than dimensions of power itself.

If the different dimensions of power are successfully engaged, they should result in enhanced capabilities of people to improve their lives and better prepare for and react to crisis, at each of the three levels of governance. If people actually use these enhanced capabilities, they should be observable as:

- Individual or family action to create private goods for the benefit of the household
- Community action (Collective action by groups) to create public goods for the benefit of the community
- Government action, in which individuals, groups or the community as a whole demand public goods and services through the government itself

Table 3.2: Measurable Indicators of Power Across Scales of Governance

Levels of Governance/ Dimensions of Power	**Household Level**	**Community Level**	**County/Government Level**
Psychological Power	Self-Efficacy	Collective Efficacy	Political Efficacy
Social Power	Human Capital Social Capital Financial Capital	Community access to Human, Social & Financial Capital	Availability of Human, Social & Financial Capital at the Government Level
Political Power	Participation in household decision-making	Participation in community decision-making	Participation in government decision-making
Observable Outcomes of Empowerment	Individual/Household Actions Taken & Resulting Change	Collective Action Taken & Resulting Change	Action Taken through the Government & Resulting Change

Relative vs. Absolute Power

Finally, power has both an absolute component and a relational or relative one. With respect to each square in the matrix, empowerment may be concerned both with an individual's own access to these sources of power, but also how that access compares to others at each level of governance. Thus each cell should theoretically be concerned with both absolute levels and

also inequality across groups. For example, if women's access to decision-making spaces in the community increases, but men's influence simultaneously increases by even more, then on net women's ability to shape their own lives may have actually decreased. On the other hand, if household incomes rise significantly, women's access to financial capital may increase without any change in their access relative to men. Greater access to funds in absolute terms may very well improve women's abilities to meet their own goals, despite a lack of change in relative terms. Similarly, greater coordination and cooperation across community members may increase social capital for everyone in absolute but not relative terms, and yet this could certainly enhance capabilities for all those involved. The importance of absolute vs relative measures of power likely depends on the degree of scarcity and competition over a particular resource at a given level of governance, and if that resource is intrinsically rivalrous or not.

One implication of the partially relative nature of power is that an intervention itself might usefully engage with both the disempowered group it targets as well as other actors who are relatively powerful. Another implication is that it is generally advisable in studies of empowerment to survey both the marginalized group whose power is intended to increase and those who initially wield greater power. In practice, it may be possible to directly compare relative levels of resources and participation in decision-making spaces, but in at least some cases (psychological power stands out in this regard) direct comparisons across individuals may not be feasible. Partly for this reason, it is important to consider not only indicators of power itself but also observations of its use in practice, as identified in the bottom row of Table 3.2.

While dimensions of power and levels of governance over which it can be employed have been discussed in the past, few empirical interventions take a comprehensive approach, attempting to influence and measure various dimensions of empowerment simultaneously. Most empirical studies that address this have focused on the relationship between social power (specifically with respect to business training) and political power (specifically with respect to participation in the government) for women. The failure of these studies to demonstrate that

one dimension reliably produces changes on the other implies that more comprehensive approaches are necessary. The next section of this paper describes an intervention in northern Kenya which combined various components of previously studied programs in an effort to address multiple dimensions of power in a single context.

3.4 Context and Intervention: Women's Empowerment in Northern Kenya

I conducted this research in partnership with an NGO[2] working in Marsabit County, Kenya. This NGO had previously supported pastoralist women in northern Kenya with grants and training to begin small businesses. In the wake of constitutional reform and related donor trends, it recently received funding to begin a political empowerment program to complement its existing business training program for women. I advised the NGO on the design and monitoring of this new program (called "the Governance Program"), but final decisions with respect to both the program design and survey structure were made by NGO staff with consideration of donor requirements, logistical concerns and complementarities with their pre-existing program. Below I describe the geographical context (Marsabit County), the institutional background (reforms related to Kenya's newly implemented constitution), the design of the intervention itself (the Governance Program) and the survey tool used to measure its effects.

Marsabit County

As of the most recent official census (2009), Marsabit County had a poverty rate of 83.2%, making it the fourth poorest of Kenya's 47 counties. Access to physical infrastructure was similarly deficient with only 7.5% of households in Marsabit having access to electricity and only 35.4% with access to improved sanitation (compared with 87.8% nationally). In terms of human

[2] The NGO name is withheld here, in keeping with the wishes of the NGO, in order to protect the anonymity of the research subjects.

capital, Marsabit ranked 44th out of 47 counties on literacy and 42nd on school attainment. Among the female beneficiaries of my partner NGO, the vast majority are illiterate.

In addition, Marsabit is comprised primarily of pastoralist populations with much household income dependent on livestock and thus particularly vulnerable to fluctuations in time of drought. While traditionally pastoralist institutions were actually among the most resilient social-ecological systems in East Africa (Mwangi & Ostrom, 2009), a combination of increased drought due to climate change, changes in land tenure that restrict traditional mobility, and exclusion from government services has increasingly threatened nomadic pastoralism and brought into question its continued viability.

Pastoralist communities in northern Kenya continue to be extremely patriarchal in nature, and are faced with extreme poverty and uncertainty in the face of persistent drought. Women in this context are particularly vulnerable to drought and other disasters. Traditional gender roles mean that women are often tasked with household water collection and childcare. A further implication of the traditional division of labor is that pastoralist men are highly mobile together with their livestock, while women often remain in semi-settled communities, where they are less resilient to drought.

Despite being most affected, women also tend to be less influential in household decision-making that might affect their ability to withstand drought. There is substantial support for the notion that both negative impacts of drought and access to elements of adaptive capacity are unequally distributed across genders (Cutter, 1995; Denton, 2002; Enarson, 2002). Cultural norms within these communities leave women with very limited decision-making power within the household, as well as very low levels of education. While we lack hard data at the county level, we do know that across my NGO partner's beneficiaries, at least 30% of women report having no influence whatsoever over household decisions such as purchasing food, children's medical bills and school fees, and this figure is as high as 90% in some communities.

Prior to providing guidance on the design of the Governance Program, I organized five focus groups in each of four regions within Marsabit County. Within each region, focus groups took place in both the central (slightly more densely populated) community and in one of the more isolated, rural satellite communities. In each location, the NGO provided a facilitator with knowledge of the local native language to conduct one focus group with prior participants in the NGO's business training program, and one focus group with women who meet the eligibility requirements but had not yet participated in the program.

Focus group participants indicated that they have little influence within the household, with their husband making most decisions without consulting them. There were also several references to domestic violence. These discussions also indicated that knowledge of the new constitution and the rights and responsibilities conferred to citizens is limited. While participants cited the constitution as bringing positive change in areas such as "gender equality" and "peace," very few details were known about what specific provisions the constitution provides to accomplish these goals. When particulars were given, they were often based upon misinformation. Several focus groups cited female genital mutilation, which is not actually referenced anywhere in the constitution. Awareness of specific governance structures and political opportunities available to women was very low across all focus groups.

Focus group discussions combined with general conditions of poverty and marginalization across Marsabit County suggest that women in this context likely face barriers on all measurable dimensions of empowerment, making this an ideal "hard case" location to study improvements on different dimensions.

Women's Status and Local Governance in Kenya

Kenya's new constitution, ratified by popular vote in 2010, mandates the use of public participation in virtually every area of governance, as well as the creation of semi-autonomous county governments, who are subject to those participation requirements. It also includes

several special provisions for women, such as a mandate that no more than two-thirds of a county executive committee be of the same gender.

However, at the time of this research, constitutional mandates were still in the process of being implemented, and provisions regarding public participation were left largely open to interpretation by individual county governments. In Marsabit County, where this study takes place, the existence of a large NGO and civil society sector was able to influence this interpretation and convince the county government to adopt a community development process called "Community Conversations" (CC) as their formal method of participatory planning. CC is a process developed by Concern, an international NGO, which they have adopted as their standard approach to development throughout the world.

CC is a participatory process meant to engage the entire community in making decisions regarding its own development, and at the time of this study, the Marsabit County government had agreed to recognize the decision outcomes of this process as its formal method of receiving citizen input into their budgeting process, as required by the new constitution. While Concern designed and advocated for the adoption of CC, it typically engages with local NGO partners as implementing agencies. Taking advantage of the formal recognition of CC on the part of the county government, my NGO partner agreed to act as a CC implementing agency, provided that it could combine that process with additional components meant specifically to empower women to take advantage of these new spaces for decision-making.

Intervention: The Governance Program

The Governance Program involved a cocktail of interventions that the implementing NGO believed would, in combination, result in women's empowerment, particularly with respect to political dimensions of power (access to and influence over decision-making spaces). It aimed to do so both by creating new community-level spaces for decision-making (through the introduction of CC's development committees) and by increasing the social power (in this case,

available knowledge and skills) of women in each community. This latter was addressed through the provision of civic education courses for the entire community and leadership and communication training for women specifically. In addition, the NGO sought to enhance its previous business training programs for women by engaging directly with men in seminars meant to educate them about the importance of the programming for women and the benefits it could provide to the community as a whole. These seminars focused on the usefulness of women's businesses for resource diversification and enhanced ability to withstand drought.

The NGO included these additional components (civic education, leadership and communication training for women, and educational seminars for men) based on a combination of direct recommendations from women in the previously mentioned focus groups, as well as advice from me based on academic literature about the success of previous women's empowerment programs.

Civic education was included because the focus groups had revealed substantial misinformation about the new governance structures. However, we also acknowledged that in a prior study (Gottlieb, 2014) civic education in absence of other gender-specific efforts actually exacerbated inequalities. We hoped that the nature of CC, which explicitly involves both men and women in its development committees, would help to allay those fears. In addition, the NGO added a women's training component that was intended to help better prepare women to take advantage of these new decision-making spaces. This was conducted through pre-existing women's groups formed during the previous business training program.

In addition, the NGO decided to include a workshop directed specifically at men in the community. This was done for three reasons. First, beneficiaries of the previous business training program reported in focus group discussions that while they had learned a lot about the importance of business diversification in their training programs, their husbands still lacked this knowledge and continued to serve as an obstacle to their business expansion. They specifically requested the addition of trainings for men. Second, the introduction of new community-level

decision-making spaces in a prior study (Beath et al., 2013) had successfully engaged women's participation but failed to have an impact on household-level decision-making. Perhaps the men's workshop could be used to change perceptions of women's roles in the households. Finally, the relational aspect of power discussed in the previous section above implies that increasing the power of a marginalized group may not even be possible without also addressing potential interference from those who benefit from the status quo.

Table 3 outlines each component of this intervention and its context with closely related previous studies. It was hoped that by combining elements of prior interventions and incorporating additional components that address their shortcomings (as described in the previous literature), this intervention could generate improvements in several dimensions of power. While each component was intended to have a direct effect on some specific dimensions of power, the combination could also theoretically have spillovers on other aspects of power in the long run.

Table 3.3: Elements of the Intervention & Hypothesized Effects on Dimensions of Power

Elements of Intervention (Treatment Group Only)	Direct Effects on Dimensions of Women's Power	Long-Term Effects in Combination
Civic Education for Men & Women, Leadership & Communication Training for Women only	Social Power: Human Capital Psychological Power: Self- & Political Efficacy	Political Power: Increased Access, Participation and Influence over Decision-Making across all three Levels of Governance & Resultant Observable Actions Taken to Improve Quality of Life
Community Development Councils with Men & Women	Political Power: Access to Community-Level Decision-Making Spaces	
Seminars directed at Men Specifically	Political Power: Access to Household-Level Decision-Making through consideration of power as relational	
Contextual Factors (Both Treatment & Control Group)		
Pre-Existing Business Training for Women	Social Power: Financial Capital Psychological Power: Self- & Political Efficacy	
New County-Level Government Structures with Quotas for Women	Political Power: Access to Government-Level Decision-making Spaces	

The Survey Instrument

In keeping with both the goals of the donor agency and the high risk of severe drought in this region, the NGO designed the survey instrument based on frameworks related to disaster resilience, understood as the capacity to withstand environmental change. Luckily, both scholarly work (Norris et al., 2008; Robinson & Berkes, 2011) and leading practitioner frameworks on disaster resilience share many similarities with the conceptualization of power outlined earlier in this paper.

DfiD's "Approach Paper on Disaster Resilience" explicitly identifies five types (Political, Social/Human, Technological/Physical, Financial/Economic and Environmental/Natural) as well as four levels (Global/regional, National, Municipal/Local and Community/Household) of resilience-building activities. As a result, the NGO's survey instrument is an imperfect but useful tool for measuring changes in dimensions of power. For example, psychological power is assessed through three sets of survey questions related to self-, collective and political efficacy. Political power is assessed through a series of questions about actual participation in decision-making at each of the three levels of governance.

Social Power is understood as access to Human, Social and Financial Capital. Because the survey was conducted at the individual level, it included questions on an individuals' general access to each category of resources, but not necessarily their availability at the community or government level specifically. Human capital is proxied by political knowledge and awareness. Regarding financial capital, the survey included a question about household income. With respect to social capital, the survey included a series of questions regarding trust in various groups and institutions at each level of governance.

Finally, the "observable outcomes of empowerment" identified in Table 3.2 are represented by a series of questions about whether or not the respondent had taken any action to "better prepare for emergency or improve their quality of life." (See Appendix 3.1 for full text of survey questions used in forthcoming regression analyses to represent each dimension.)

3.5 Methodology

This study examines a pilot of the Governance Program described above using a quasi-experimental approach. The NGO selected eight of its beneficiary communities (villages where the women's financial empowerment program had already been offered), and assigned four to the treatment group (where the intervention would be implemented) and four to a control group (where only the surveys would be conducted, but where the NGO planned to eventually implement the intervention, beyond the pilot period). Selection of the eight communities was not random, but rather selected to represent the range of beneficiary communities served by the NGO. Selection also avoided the communities previously visited for focus group discussions, so as to avoid bias in the results. Assignment to treatment and control groups was similarly conducted in a way that attempted to balance the two groups based on size and general location within Marsabit County. One of the control villages was unfortunately dropped because logistical complications made it not possible for the NGO to access the community during the time when baseline surveys were conducted in the other seven locations.

In all seven remaining locations, the NGO conducted a baseline survey in May 2014 and included 358 respondents (264 women) selected through a random walk methodology in each of the treatment and control communities. After the implementation of the intervention, the NGO conducted a follow-up survey in January 2015, which was intended to include the same individuals from the baseline survey. However, some respondents could not be re-located for the follow-up survey, and these participants were dropped from the analysis. The follow-up survey included 281 respondents (230 women). The main predictor of survey attrition was maleness, likely due to the nomadic habits of men in the region. Since our outcomes of interest relate to women specifically and the difficulties of surveying men would introduce bias into the results, the regression analysis was conducted on the subsample of women only.

The initial and follow-up surveys ask the same questions of the same women. The 34 women who could not be located for repeat questioning at endline were dropped from the

analysis. A balance test confirms that they do not differ from other women in the survey in a significant way that should affect interpretation of the results (See Appendix 3.2).

Because selection was not truly randomized, I employ a difference-in-difference analysis, which compares only the change in outcomes between the treatment and control group, rather than absolute measures at endline. Simply comparing a treatment and control group is problematic because differences between them may predate the intervention in question. Similarly, comparisons of the treatment group alone, before and after the intervention, is problematic because other changes may have occurred in the region over the same time period and could actually be driving the results. The difference-in-difference methodology avoids these two problems, but makes an assumption that any changes in outcomes over time would have followed the same trend in absence of the intervention (Angrist & Pischke, 2008).

Each hypothesized category of effects (the dimensions of power from the conceptual framework section) was regressed on a binary variable indicating whether the observation was from the treatment or control group, another binary variable indicating whether the observation was from before or after the intervention, and an interaction term between the two. This interaction term is the estimated effect of the intervention because it is the combined effect of being in the treatment group and being surveyed after the intervention occurred (Puhani, 2012).

The regressions follow an intent-to-treat analysis and thus may underestimate impact of the program, because the survey includes those in the treatment group who did not in fact participate directly in the program. This is the preferred approach for two reasons. First, if very few people select into a program then it may be inadvisable from a policy standpoint even if the few people who participated did benefit. Second, the difference-in-difference design requires that the treatment and control groups be comparable. Comparing the entire control group only to those who participate in the program would bias the results, since we cannot identify the people in the control group who counterfactually would have participated given the opportunity.

Regressions also include common demographic controls, related to age, gender, education (literacy, in this case) and household income, and make use of robust, clustered standard errors.

The regression results below include a mix of linear, logit and ordered logit regressions, depending on whether the outcome in question was continuous, binary or categorical.

3.6 Findings

In keeping with the conceptual framework described earlier, I use regression analysis to examine the impact of the intervention on various dimensions of power: psychological (does one believe oneself to be capable of action?), material/economic and social (does one have the necessary resources for action?), and political (can one access relevant decision spaces?).

As discussed earlier, the dimensions of power described in Table 3.1 are not easily measurable. Table 3.2 describes the more directly measurable outcomes or counterparts to the dimensions of power described in Table 3.1. An individual's access to knowledge (an aspect of human capital) is best assessed through actual knowledge, for example. In addition, the most theoretically precise measurable indicators of power in Table 2 are not always available in practice, so proxies are used based on what was available in the survey used by the NGO.

Thus, I analyze psychological power using survey questions about self-, collective and political efficacy. Social power (access to resources) is measured through income (financial capital), trust (social capital) and political knowledge (human capital). Political power (access to decision-making spaces) is measured through actual participation in decision-making spaces within the household, community and government. (See Appendix 3.1 for a full list of survey questions used in each section of the analysis.)

Psychological Power: Beliefs in Abilities (Self-, Collective and Political Efficacy)

To assess impacts on psychological empowerment, the survey included 5 questions each related to self-, collective and political efficacy (Table 3.4). The five questions for each level were

then loaded into composite indicators for each level using Principal Components Analysis. The intervention had no statistically significant effect on any level of efficacy. In addition, all coefficients were negative, except with respect to two of the sub-questions on political efficacy, which were related to perceived political knowledge and access to information.

One possible explanation for the negative coefficients is that increased knowledge of the political structures that exist serves only to make people aware of how much they do not know, initially decreasing confidence in their abilities to make an impact. This could be related to the short time horizon over which the surveys were conducted, and it is possible that once people have had time to familiarize themselves with the new governance structures that efficacy will improve over the long-run. Taken together with other findings, it may suggest that at least in the short-run, encouraging greater political participation, in the absence of tangible results of that participation, may have the adverse effect of political disenchantment.

Table 3.4: Psychological Power – Beliefs in Abilities

	Self-Efficacy	Collective Efficacy	Political Efficacy
Treatment	-0.727	0.0340	-0.127
	(1.094)	(0.500)	(0.279)
Endline	1.350**	1.393**	1.130*
	(0.256)	(0.241)	(0.334)
TreatmentEndline	-0.296	-0.337	-0.420
	(0.307)	(0.289)	(0.420)
Financial Program	0.285	0.197	0.145
	(0.391)	(0.194)	(0.201)
Age	-0.0147*	-0.00840	-0.00316
	(0.00496)	(0.00571)	(0.00790)
Literacy	-0.0416	-0.405	0.892*
	(0.481)	(0.488)	(0.307)
Income	-0.000291	-0.0127*	0.00719*
	(0.00408)	(0.00464)	(0.00213)
Constant	0.0610	-0.366	-0.580**
	(0.894)	(0.351)	(0.143)
Observations	441	435	442

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3.5: Human Capital: Political Knowledge & Awareness

	Correct Answers on Political Quiz	Wrong Answers on Political Quiz	Non-Answers on Political Quiz	Awareness of female politicians
Treatment	-0.186	-0.227	0.413	-0.397
	(0.0946)	(0.170)	(0.225)	(0.749)
Endline	0.154	0.0682	-0.222	-0.395*
	(0.0786)	(0.0518)	(0.100)	(0.189)
TreatmentEndline	0.479*	0.395***	-0.874***	0.713**
	(0.134)	(0.0593)	(0.131)	(0.258)
Financial Program	0.118	0.140	-0.257**	0.476**
	(0.0639)	(0.0921)	(0.0575)	(0.172)
Age	0.00355	-0.000487	-0.00306	-0.000331
	(0.00207)	(0.00112)	(0.00181)	(0.0114)
Literacy	1.471*	0.571**	-2.041**	0.814**
	(0.397)	(0.153)	(0.497)	(0.258)
Income	0.00554	0.00204	-0.00758	-0.00666
	(0.00550)	(0.00172)	(0.00647)	(0.00346)
Constant	0.463**	0.717**	5.821***	0.253
	(0.118)	(0.167)	(0.168)	(0.343)
Observations	443	443	443	439

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Social Power: Access to Resources (Human, Social & Financial Capital)

There is no statistically significant change in total household income (a measure of financial capital) relative to the control group as a result of the Governance Program. This is perhaps unsurprising given that the field experiment examines impact of the additional Governance Program interventions, not the initial financial empowerment program (which was offered in both treatment and control groups prior to the beginning of the Governance Program).

One aspect of human capital directly addressed in the intervention (and thus measured on the related survey) was political knowledge and awareness (Table 3.5). The survey also included questions about trust in various groups and institutions at each level, which are used

here as a proxy for social capital at each level. Note that what is being measured here is an individual woman's access to these various resources, not the sum total of human, financial or social capital available within the community or government institutions.

There was a significant impact on both political knowledge and awareness of female politicians, both of which increased as a result of the program. In addition, the results show that as a result of the intervention, women are more likely to answer the questions on the politics quiz, even if they get the wrong answer. This is interesting in light of prior research that demonstrates the gender gaps in tested knowledge (at least in the United States) can be explained in large part by men's greater willingness to guess (Mondak & Anderson, 2004). This greater willingness to guess (perhaps related to risk-seeking behavior) also appears to be influenced by literacy and having participated previously in the financial empowerment program.

As a rough proxy for social capital and social cohesion, the survey also reports on levels of trust in various institutions and groups at each level of governance (Table 3.6). The only statistically significant results in this section are that the intervention has had a negative impact on trust in the community leader but a positive impact on trust in one's spouse. While not significant, the other coefficients seem consistent with these results: trust related to government institutions or community level groups indicate negative results. Meanwhile the results appear positive relevant to trust in family, spouse and other women.

None of the effects with respect to social capital/trust are particularly large in magnitude, but they do seem consistent with other results (described in the section below), which indicate mixed results at the community and government level, but positive results at the household level.

Table 3.6: Social Capital – Trust at Various Levels

	How much trust do you place in each of the following?							
	Spouse	Family	Friends	Community leader	Community members	Other women in community	County government	National government
Treatment	-0.148	-0.338	0.619	1.156***	1.040*	0.426	0.0155	-0.180
	(0.321)	(0.456)	(0.453)	(0.288)	(0.529)	(0.403)	(0.225)	(0.433)
Endline	0.266	-0.259	0.199	1.487***	1.104*	0.432***	2.290***	2.288***
	(0.335)	(0.512)	(0.831)	(0.311)	(0.441)	(0.0752)	(0.556)	(0.566)
Treatment* Endline	1.737***	0.743	-0.570	-0.886**	-0.456	0.583	-0.246	-0.270
	(0.517)	(0.958)	(0.869)	(0.335)	(0.556)	(0.485)	(0.684)	(0.493)
Financial Program	-0.492	-0.247	0.168	0.149	0.0857	0.0886	0.108	0.272
	(0.518)	(0.397)	(0.219)	(0.154)	(0.207)	(0.190)	(0.193)	(0.243)
Age	0.0229	0.0220	0.00460	0.00539	0.0143	0.0107	0.000118	-0.000639
	(0.0206)	(0.0181)	(0.00540)	(0.00750)	(0.00804)	(0.00814)	(0.00701)	(0.00687)
Literacy	-0.599*	14.80***	1.016*	-0.0369	0.248	0.0541	-0.111	-0.206
	(0.281)	(0.615)	(0.402)	(0.328)	(0.219)	(0.541)	(0.302)	(0.570)
Income	0.0283	-0.00196	0.00747	-0.00417	-0.00325	0.00763	0.00661	0.00565
	(0.0358)	(0.0101)	(0.00970)	(0.00416)	(0.00604)	(0.0125)	(0.00433)	(0.00555)
Constant	-2.934**	-3.143***	-3.289***	-1.153*	-1.270***	-2.548***	0.887**	1.141***
	(1.088)	(0.670)	(0.641)	(0.584)	(0.310)	(0.631)	(0.279)	(0.242)
Observations	399	442	443	442	442	442	439	440

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 3.7: Women's Decision-Making Power in the Government

	In the past three years, have you:								
	Made donation of time or money	Voted	Petitioned government for something	Participated in an association	Contacted an influential person	Participated in an information campaign	Protested or demon-strated	Contacted your elected represent-ative	Talked to people in your area about a problem
Treatment	0.406 (0.464)	-0.581 (0.752)	1.310 (0.910)	0.206 (0.333)	0.391 (0.748)	-1.285 (1.607)	-1.345 (1.173)	-1.103 (0.945)	-0.839** (0.279)
Endline	1.957* (0.793)	-1.457* (0.634)	2.053*** (0.480)	0.727*** (0.122)	3.114*** (0.798)	1.514 (1.037)	-0.142 (0.0867)	1.063 (0.635)	0.674 (0.496)
Treatment* Endline	-0.842 (1.068)	1.381* (0.615)	-1.769** (0.554)	0.00113 (0.574)	-1.149 (1.158)	-0.422 (1.348)	0.158 (1.645)	0.238 (1.219)	0.601 (0.591)
Financial Program	-0.304 (0.348)	0.427 (0.442)	0.347 (0.185)	1.834*** (0.413)	0.630 (0.696)	1.296 (0.750)	1.057 (0.793)	0.247 (0.702)	0.0986 (0.246)
Age	-0.0164 (0.00877)	0.105** (0.0389)	0.0136 (0.00892)	0.0104 (0.0142)	0.0171 (0.0154)	-0.0399 (0.0281)	-0.0361* (0.0163)	0.0119 (0.0150)	-0.00332 (0.00929)
Literacy	-0.848 (0.517)	-1.105 (0.570)	-0.328 (1.286)	1.054* (0.443)	2.043*** (0.332)	0.607* (0.275)	0.949* (0.387)	1.206* (0.607)	0.0639 (0.131)
Income	0.0300* (0.0135)	0.0494 (0.0359)	-0.00933 (0.00892)	-0.0120 (0.0167)	0.0194* (0.00811)	-0.000447 (0.0125)	0.0175 (0.00983)	0.00845 (0.00655)	0.00392 (0.00629)
Constant	0.168 (0.659)	-0.327 (0.900)	-4.529*** (0.449)	-3.462*** (0.715)	-5.986*** (0.902)	-3.048*** (0.523)	-3.163*** (0.572)	-3.682** (1.235)	-0.473 (0.501)
Observations	443	443	441	443	443	443	443	442	443

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Political Power: Access to Decision-Making Spaces

Decision-Making Power in the Government

I find few statistically significant effects on a number of measures of women's involvement and influence in formal government structures (Table 3.7). Those that are statistically significant should be interpreted cautiously. Women in the treatment group were more likely to have voted and less likely to have petitioned the government. There is no statistically significant impact with respect to other forms of participation at this level. The negative impact on petitioning the government is difficult to interpret. This could reflect distrust in the government or political disenchantment. However, it could also reflect a feeling that needs are being met through other means. On the whole, there simply weren't large effects on political participation at the level of the government, though of course this may change once the new political structures have been in place for a longer period of time.

Decision-Making Power in the Community

After the intervention, women in the treatment group are more likely to say that they have attended a meeting where village decisions were made (Table 3.8). This indicates at least that the Community Conversations methodology was more successful than previous iterations at giving women physical access to decision-making spaces and/or convincing them to attend. However, they are not any more likely to have actually spoken at the meeting.

An additional question, regarding whether the women "felt that others listened to you" during the meeting was dropped from the regression analysis because all but one of those women who said they had spoken also said that they felt heard. However, women in the treatment group also rate the attention paid to them by local leaders lower relative to the control group.

Table 3.8: Women's Decision-Making Power in the Community

	Ever attended session where villagers gather to make a decision	Ever spoken at this meeting	Level of attention you feel local leaders pay to what people think before deciding
Treatment	0.156	0.498	-0.512
	(0.379)	(0.698)	(0.434)
Endline	-0.0944	0.136	-0.0681
	(0.298)	(0.235)	(0.382)
TreatmentEndline	1.574***	-0.126	-0.947*
	(0.317)	(0.374)	(0.483)
Financial Program	0.422	0.194	-0.0358
	(0.293)	(0.445)	(0.226)
Age	0.0126	0.0257*	-0.00421
	(0.0103)	(0.0103)	(0.00729)
Literacy	0.923***	1.249	0.304
	(0.125)	(0.883)	(0.232)
Income	0.0111	0.0268**	0.00545
	(0.00691)	(0.00949)	(0.00361)
Constant	-1.938***	-3.611***	
	(0.477)	(0.850)	
Observations	443	442	378

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Decision-Making Power in the Household

The survey also included a series of questions related to household decision-making (Table 3.9). The data reported in Table 3.9 were in response to questions about "who has the final say" in decision-making related to each category. Thus they are a particularly hard test of women's influence, since even where men reportedly have the final say, women may have some degree of soft influence over the decision.

I find that this intervention did lead to changes in household decision-making power for women in at least two categories of decisions: food purchases and school fee payments. The coefficients for other categories are positive, but not significant, except with respect to medical expenses, where the coefficient is negative but not significant.

Table 3.9: Women's Decision-Making Power in the Household

	Degree of Women's Influence Over Decisions Related to:					
	Children's Schooling	Food Purchases	Household Items	Livestock	Medical Expenses	School Fees
Treatment	0.251	-0.0690	-0.823*	0.459*	0.552*	0.221
	(0.238)	(0.223)	(0.338)	(0.203)	(0.271)	(0.166)
Endline	0.277	-0.687***	-0.235	-0.101	-0.214	-0.327***
	(0.270)	(0.144)	(0.735)	(0.165)	(0.247)	(0.0720)
Treatment* Endline	0.486	0.534*	0.323	0.116	-0.271	0.325**
	(0.362)	(0.264)	(0.857)	(0.197)	(0.401)	(0.121)
Financial Program	0.0777	0.0905	0.201	0.150	0.218	0.287
	(0.249)	(0.246)	(0.294)	(0.217)	(0.357)	(0.272)
Age	0.0265*	0.0267*	0.00186	0.0297*	0.0302*	0.0247
	(0.0124)	(0.0104)	(0.0101)	(0.0143)	(0.0131)	(0.0143)
Literacy	0.529	-0.550	0.621	0.170	-0.229	-0.129
	(0.317)	(0.457)	(0.687)	(0.192)	(0.293)	(0.375)
Income	0.00984*	0.00294	0.00227	-0.0165	0.00522	0.00473
	(0.00476)	(0.00836)	(0.0101)	(0.0121)	(0.00745)	(0.00802)
Constant	1.335***	1.569***	-1.059*	2.605***	2.472***	2.472***
	(0.339)	(0.347)	(0.516)	(0.502)	(0.573)	(0.484)
Observations	418	442	439	371	429	408

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Observable Outcomes of Empowerment

While the questions above assess women's perceptions of their access to decision-making spaces and ability to influence decisions, the survey also asked for examples of actual actions taken at each level of influence (Table 3.10). Theoretically, a person can be 'empowered' to take actions and still decide not to take them. However, given imperfect measures of specific dimensions of power and the fact that actions are inherently more observable than capacities, an empirical approach requires some attention be paid to actual uses of power.

I find that women in the treatment group are more likely after the intervention to say that they had taken action in the household to better prepare for emergency or improve their quality of life. When asked what these actions comprised, the vast majority replied that they had

"sold livestock." The effect on political action is positive but not statistically significant, but when political action is taken, women are likely to report that it was unsuccessful (and this is statistically significant).

Table 3.10: Observable Actions

	Actions to better prepare for emergency or improve quality of life, within the past year:					
	Taken action in Household?	Were any successful?	Take action with the community?	Were any successful?	Action within the government?	Were any successful?
Treatment	-1.352	-2.422*	0.584	0.000	-0.173	-1.392
	(0.739)	(1.099)	(0.633)	(.)	(0.550)	(0.892)
Endline	0.749***	0.498	0.959***	0.795	-0.111	2.548***
	(0.197)	(1.466)	(0.201)	(1.541)	(0.300)	(0.368)
Treatment* Endline	1.734**	2.128	-0.0887	0.000	0.148	-1.276*
	(0.528)	(1.912)	(0.399)	(.)	(0.347)	(0.573)
Financial Program	0.685*	0.466	0.359	-0.420	0.549**	0.646
	(0.343)	(0.807)	(0.444)	(0.423)	(0.169)	(0.390)
Age	-0.000605	-0.00787	0.00558	0.0109	-0.00220	-0.00564
	(0.0117)	(0.0481)	(0.0119)	(0.0264)	(0.0101)	(0.0218)
Literacy	0.396	0	-0.167	0.000	0.364	-0.252
	(0.474)	(.)	(0.799)	(.)	(0.403)	(0.428)
Income	-0.000989	-0.00435	-0.0182	0.0463	-0.0109	0.00436
	(0.00868)	(0.0387)	(0.0122)	(0.0773)	(0.0115)	(0.00832)
Constant	-1.587***	2.999	-2.755***	-0.264	-0.847	-0.144
	(0.445)	(2.609)	(0.515)	(2.007)	(0.481)	(1.188)
Observations	413	112	385	39	400	185

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

This helps explain the negative coefficients on political efficacy, how much attention local leaders pay, and even intentions of petitioning the government. If the intervention encouraged women to engage in political action, but this action has yet to yield any results, an initial negative effect on perceptions of politics is logical. However, being a participant in the financial empowerment program is associated with a greater likelihood of having engaged in political action. In addition, the coefficient on participation in the financial empowerment

program is positive for the question about whether any political action taken was in fact successful.

While I cannot directly assess interactions between previous participation in the financial empowerment program and the newly implemented governance program, the positive effect of prior participation on successful political action offers some preliminary evidence that, although one does not automatically result in the other, there are complementarities between improvements in social and political power.

3.7 Discussion

To summarize the results from the previous section, there were no significant effects of the intervention on the psychological dimensions of power for women, as measured by the survey. With respect to social power, there was no effect on financial capital, a positive effect on human capital (as measured by political knowledge) and mixed results with respect to social capital. Human capital did increase as a result of the intervention, but only knowledge with respect to government-level structures was measured. Social capital, proxied here by self-reported trust in various institutions, increased at the household level (trust in one's husband), but decreased at the community level (trust in the community leader).

Political power (participation and influence in decision-making spaces) increased at the household level, but results were mixed at the level of the community and the government. Women were more likely to have attended community decision-making meetings (increased access) but less likely to report that community leaders paid attention to their concerns (decreased influence). They report being more likely to vote but less likely to directly petition the government for support – indicating increased participation in some regards but decreased participation in others.

In the category of observable actions taken as a result of empowerment, women were more likely to say that action had been taken at the household level. They were no more likely to

say that action had been taken at the community or government level, but if action had been taken at the government level, they were less likely to report it as successful. Statistically significant results and the direction of their influence are summarized in Table 3.11.

Table 3.11: Summary of Results by Dimensions of Power and Levels of Governance

Levels of Governance/ Dimensions of Power	**Household Level**	**Community Level**	**County/Government Level**
Psychological Power	No significant effect	No significant effect	No significant effect
Social Power	Increased Social Capital (+)	Decreased Social Capital (-)	Increased Human Capital (+)
Political Power	Increased Participation in HH Decision-Making (+)	Increased Participation (+) Decreased Perceived Influence (-)	More likely to vote (+) Less likely to petition the government (-)
Outcomes of Empowerment	Increased HH Action (+)	No significant effect	Decreased success of actions taken (-)

Taken as a whole, results are very mixed at the community and government level. At both of these higher levels of governance, participation in some form does increase, but more intensive involvement and perceived influence in those processes either decreases or is unaffected. In contrast, there is substantial evidence that something is changing with respect to the internal dynamics of the household. Trust in the spouse increases, women are more likely to be involved in at least some household decisions, and the household as a unit is more likely to have actual taken action to make change.

Interestingly, though the intervention was primarily designed to enhance women's influence in community and government decision-making processes, most of the actual results are concentrated at the household level. What might explain these results? While this research design does not make it possible to distinguish the effects of different components of the intervention, results can be compared with previous research to better understand the causal mechanisms underlying them.

Similar to this study, Gottlieb's (2014) study introduced civic education training for both men and women and found that political knowledge increased as a result. That study, however, found that civic engagement (measured at the level of the government) unequivocally decreased for women, while increasing for men. My results instead suggest mixed results with respect to women's participation, depending on the form of engagement (voting vs. petitioning) and the level of governance (community decision-making for a vs. formal government structures). Unfortunately, I could not measure the relative effect on men because of the problems described earlier with respect to the survey sampling for men.

In another study with similar components to this one, Beath et al. (2013) looked at an intervention that introduced new community-level decision-making structures in a context of extreme patriarchy, and found that women not only do engage in these community councils, but that female participants in those councils were more likely to have held a meeting with the district government. My results are more mixed at both levels of governance. Like Beath et al., women participate more in community-level decisions, but unlike Beath et al., they do not engage more with the formal government and do not seem to feel they are having an impact. On the other hand, Beath et al. find no effect on influence in intrahousehold decision-making, whereas my results indicate a small, but significant impact at that level of governance.

Table 3.12 outlines the similarities and differences between the three studies with respect to both the intervention itself and the effects on dimensions of women's empowerment. Because the other studies did not measure all of the same dimensions of power discussed in this paper, the table only includes those outcomes over which the studies used comparable measurements. The Governance Program essentially combines the main components of the previous two interventions, while also adding a few additional components. The mixed results with respect to community and government-level decision making could be quite consistent with an additive effect of the results found by each of the two previous studies separately.

Table 3.12: Putting the Results in the Context of Related Studies

	(Beath et al. 2013)	(Gottlieb 2014)	Governance Program (Grillos 2015)
Components of the Intervention			
Creation of new Community Decision-Making Fora	✓		✓
Civic Education for Men & Women		✓	✓
Leadership & Communication Training for Women			✓
Men's Training			✓
Implemented through Previous Business Training for Women			✓
Effects on Dimensions of Power			
Social Power: Human Capital Political Knowledge	(not measured)	Increased	Increased
Political Power:			
Participation in Government Decision-Making	Increased	Decreased	Mixed Results
Participation in Community Decision-Making	Increased	(not measured)	Mixed Results
Participation in Household Decision-Making	No effect	(not measured)	Increased

The results with respect to intra-household dynamics, however, do not appear to be explained by either the introduction of new community-level decision-making institutions or the provision of civic education alone. In the case of the former, no effect was found, and in the latter, it was not measured because the author found no compelling theoretical reason to expect a household-level effect. Furthermore, the overarching conclusion of the Gottlieb study was that discriminatory gender norms were in fact exacerbated by the intervention, making it seem unlikely that gender roles with respect to household decision-making would be overturned as a result.

Other possible explanations for the household-level effects include: (1) The household-level effects were entirely a result of the additional components of the intervention that differ from the other two studies; (2) The combination of the key interventions from the previous two studies produces results that differ from the mere aggregation of their separate impacts – in other words, there are interaction effects between the different components of the intervention;

(3) Contextual differences between the study settings account for different results from similar intervention types; (4) Minor differences in actual implementation of similar programming in different studies may also explain differences in observed outcomes. Of course, it is possible that all four of these explanations play some role in explaining differing results, but some are likely more influential than others.

A qualitative understanding of the study context, combined with some descriptive data, suggests that the first explanation above accounts plays some role in explaining the household level results, in particular through the addition of the training seminar for men only. When questioned about the nature of actions taken at the household level, the majority of those surveyed reported that the household-level action involved the sale of livestock to diversify income. Income diversification was a strategy directly discussed in the seminars for men. In addition, even in the treatment group after the intervention, 75% of women surveyed report that men alone have the final say regarding livestock sales in their household. Although women's influence experienced a statistically significant increase in some household-level decisions, livestock was not one of those categories. This is consistent with cultural norms across the study region, where care of livestock is the activity most strongly associated with men.

It thus seems likely that after attending the men's seminar, men in the region were persuaded of the need to diversify income by selling some livestock, and the resulting cash liquidity may have contributed to women's increased influence over other household decisions related to expenditures. This is also consistent with the finding that women report increased trust in their spouses. If reluctance to sell livestock to support women's businesses was previously a point of household-level tension (which was indicated in the pre-intervention focus group discussions), then this shift would plausibly result in increased trust between spouses.

In addition, there is some evidence to suggest that contextual factors, in particular the fact that this study was conducted in a context where business training for women had already been provided, may also have influenced the outcomes of the study. Apart from the impact of

the intervention itself, the variable representing participation in the prior financial empowerment programming (which was evenly split across the treatment and control group) was significant with respect to several outcomes as well, including: willingness to guess on the politics quiz, awareness of female politicians, and taking both individual and public action. This might indicate that the presence of this pre-existing programming prepared women to take advantage of these new structures – but the additional gains represented in the results of the field experiment were available only to those women in the treatment group (those who also had access to the Governance Program as described above).

This discussion of causal mechanisms is still largely speculative. With the given data, it is not possible to say for sure which components of the intervention acted on which results in what combinations. However, the recognition of competing explanations for these results and the inability to definitively distinguish between them signals some important areas for further research.

3.8 Areas for Future Research

The implications of these findings for future areas of research are multiple. First, there is a need for more studies looking at a combination of programs, rather than a single dimensional approach. In reality, interventions do not occur in a vacuum, even when they are implemented as true randomized controlled trials. There have almost always been other programs implemented previously which may influence related results, and these prior (and sometimes ongoing) experiences can change the outcomes of a given experiment. Acknowledging these other influences more explicitly with a deeper qualitative understanding of existing context can help to make sense of seemingly conflicting results across settings.

Findings also suggest further acknowledgement of power as a relational concept. While many empowerment programs focus on capacity-building of the sort represented by the social and economic rows in the conceptual framework above, an acknowledgment of the political

dimensions of power reminds us that it may be necessary to engage with actors apart from those we intend to empower. For example, engaging with men may be necessary if we aim to empower women. Future research should examine interventions that directly engage men and consider the impact of interventions on men and their reactions to them.

More attention should be paid in general to understudied dimensions of power, such as psychological empowerment. Recently there has been a surge of interest in the relationship between psychology and poverty (Haushofer, 2014; Haushofer & Fehr, 2014; Mani et al., 2013; Mullainathan & Shafir, 2013; Haushofer & Shapiro, 2013). It would be useful to more explicitly connect this line of research with the literature on empowerment and gender inequality.

Finally, experiments should be designed to isolate interactions between different dimensions of power. Rather than assessing the impact of a single program (or even a combination of programs as was done here), a more sophisticated approach would involve multiple treatments with some subjects receiving each program alone and others receiving a combination. In this way, we can gain a more nuanced understanding of the ways in which these various dimensions relate and interact with each other.

Concluding Thoughts

While each of the three studies included in this dissertation addressed a distinct set of questions in a specific context, some broader themes relating to the study of participatory development emerge across all three.

First, there is still a need for *greater conceptual clarity*, not only with respect to the various forms that participation can take and the various goals it can be invoked to seek, but also regarding various hypothesized effects of and motivations for participation.

In the first essay, it was necessary to expand an examination of motivations for participation to include not only material costs and benefits, but also non-material motivations relating to environmental beliefs, and social norms. The nature of these non-material motivations and how they can be activated still requires further elucidation. In the second essay, I discussed how elite capture is usefully distinguished from elite control and from other forms of capture, and I demonstrate that capture can occur at various points within a given participatory process. The conceptualization of capture could benefit from still further complexity, recognizing the different ways that capture can occur and how certain policy responses may target one at the exclusion of others. In the third essay, I attempt to unpack the concept of empowerment, recognizing that power operates along multiple dimensions and at different levels of governance, and finds expression both within and across individuals.

Second, my interpretation of results in all three studies suggests the potential *relevance of the implementing agency* and *pre-existing social institutions*. Participatory processes are not created in a vacuum. They are created by an actor or set of actors embedded within a particular social structure. The implementing agent very likely has a pre-existing relationship (whether through actual interactions or reputational effects) with intended beneficiaries or participants, which may influence the answers to all three sets of questions examined in the chapters of this dissertation.

In the first essay, the existence of strong cultural norms regarding reciprocity in the research setting and the fact that the NGO implemented the program through a pre-existing participatory process likely played an important role in producing the observed results with respect to the decision to participate. In the second essay, the outcomes with respect to poverty targeting in the Indonesian government's program differ from those found in previous studies of a similar program run by the World Bank in the same country. Differences may be attributable to differing institutional design on the part of the two implementing agencies or to different relationships, perceptions or historical experiences with each implementing agency on the part of participants in the process. In either case, the implementing agent and the social structure within which it is embedded is a relevant factor. In the third essay, the implementing NGO had conducted a financial empowerment program previously in these same communities. The concentration of effects at the household level may be an additive result of combining the previous program with the new Governance Program, or they may be a result of particular programming choices made by the NGO in this case, such as the decision to directly engage with men. However, the decision to work directly with men was based on feedback from previous participants about the limitations of the previous intervention. Thus in either case, the implementing agency's pre-existing relationship with the beneficiary communities played a role in producing those effects.

Third, studies of participatory development could benefit from more *direct engagement with literature on psychology and behavioral economics*. In the introduction, I highlighted the role of rational choice and sociological models of human behavior in influencing our understanding of the effects of different forms of participation. Lessons from psychological understandings of human behavior can help bridge the gap between the two, by recognizing effects that are not strictly rational but still potentially measurable.

In the first essay, Fundación Natura framed their compensation contracts as reciprocal agreements in an effort to associate the program with pre-existing reciprocity norms. In the

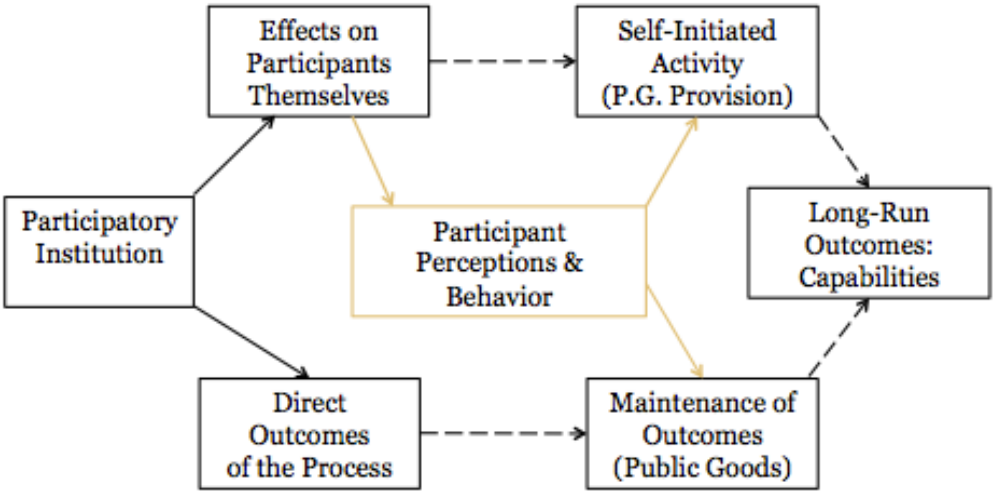
second essay, the conceptual framework on elite capture highlights the potential role of deliberation in mitigating self-interested decision-making. Both of these involve psychological mechanisms, which do not operate through strictly rational costs and benefits, but unlike more nebulous and context-specific sociological factors, they can theoretically be isolated and tested in a laboratory setting. In the third essay, I review theoretical literature on power, which considers it to have psychological as well as material and social components. This further suggests that laboratory experimentation relating specific forms of participation with psychological constructs such as efficacy could be very useful.

Finally, while outside the scope of this dissertation project, the final two sets of questions I identified in the introduction remain underexplored. These involve the *evolution over time* of a particular participatory process and more systematic comparisons of participatory processes across settings. This suggests the need for both zooming in through detailed study of a single research setting over a long period of time, and zooming out through a *systematic review of existing research* on various participatory development initiatives. This review would ideally code existing studies according to various aspects of institutional design, characteristics of the implementing agent as well as the participants and the relationship between them, features of the broader political and cultural context, as well as the observed effects of each study. A meta-analysis of this sort would allow researchers to identify which, if any, relationships are truly generalizable across research settings.

In making these more holistic assessments of existing and forthcoming studies, several points from the introductory remarks are worth restating here. First, the particular institutional form taken by a participatory process will depend in part on the understanding of human behavior and of the effects of participation held by those in charge of designing it. These understandings typically relate to either empowerment justifications (related to effects on participants themselves) or effectiveness justifications (related to direct outcomes of the process).

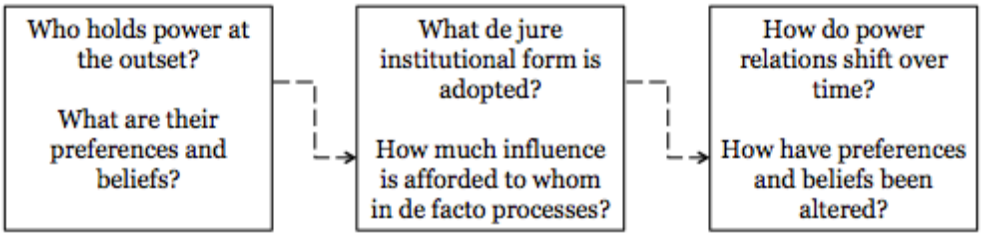
However, taking a long view of participatory processes, these two sets of outcomes are actually just distinct causal pathways meant to arrive at the same long term goal of development: enhancing the capacity of individuals and communities to direct their own lives (Sen, 1999) – See Figure 4.1. Seen in this way, these different effects have great potential to be mutually reinforcing. The direct outcomes of a development program (new infrastructure, for example) may leave people more well-equipped to engage in other kinds of beneficial action. Meanwhile, empowerment through the participatory process itself may make it easier for people to obtain such goods in the future. In addition, the psychological effects I discuss earlier hint at a medium-run path in which participation influences the perceived relationship between people and these direct outcomes, perhaps changing their behavior in ways that strengthen both.

Figure 4.1: Theorized Effects of Participatory Development – A Long-Term View



However, a truly dynamic view of participatory development should acknowledge that the figure above reflects only a snapshot of a process that may repeat itself many times in a linked chain. As outlined in Figure 4.2, the power, preferences and beliefs of individuals as well as the relationships between them are what will influence the participatory institution that is adopted in a particular setting. At the same time, an optimistic view suggests that these status quo characteristics may still be altered through participation in a given participatory process.

Figure 4.2: Understanding Participatory Development as a Dynamic Process Over Time



Much of this potential is evident (though not realized) in the cases discussed in this dissertation. In the first essay, a conservation NGO designed the process and their main goal was to improve forest conservation. However, by engaging with pre-existing reciprocity norms, they hoped to invoke complementary changes in individuals' perceptions of their relationship with the environment and the broader community. If very successful, it is possible to imagine an outcome in which these changes even motivate communities to push for corresponding changes within the NGO or government processes to match their own commitment to reciprocity.

In the second essay, the government introduced a participatory planning process with multiple public goals, including increased transparency, legitimacy and poverty alleviation through provision of public goods and services. The goals of local leaders within each administrative unit may vary and thus explain differing outcomes across the neighborhoods of the city. However, as civil society groups (such as the NGO that collected the data I analyze here) take an interest in the process, and make efforts to promote effective participation by the poor, it is possible for this process to serve as a vehicle for subverting the wishes of wealthy elites, even in neighborhoods where they currently dominate the process.

In the third essay, despite explicit efforts on the part of the implementing NGO to promote women's engagement with community and governmental decision-making, there is little improvement and even some evidence that suggests women are disillusioned by the process. Though the new community-level decision-making bodies are designated as formal avenues for input to the government, it may be the case that the government itself has little

incentive to actually respond to any resultant demands, leading the women to feel that their participation is pointless. However, a heightened awareness of their political rights in combination with a strengthened partnership at the household level may ultimately lead community members to demand greater political accountability over the long run.

Despite potential complementarities between differing outcomes, these hopeful results remain elusive. They have not yet been fully realized in any of the preceding cases (though they still may be in the future), perhaps in part because the choice of institutional form itself is subject to the same status quo power relations, material conditions and social structures that participation may ideally seek to change. What types of institutions in which contexts can achieve such a positive feedback loop remains a question for future work. In my view, the best way to approach this question is to engage in a systematic coding of existing studies according to specific institutional form, contextual and sectoral setting, and individual and social characteristics, preferences and beliefs at different points in time. Perhaps through such an endeavor we can finally help to realize the many promised benefits of participatory development.

References

Albó, X., Godínez, A., Libermann, K., & Pifarré, F. (1989). *Para Comprender las Culturas Rurales en Bolivia*. La Paz: Ministerio de Educación y Cultura

Angrist, J. D., & Pischke, J. S. (2008). *Mostly harmless econometrics: An empiricist's companion*. Princeton university press.

Antlöv, H. (2003). Village government and rural development in Indonesia: the new democratic framework. *Bulletin of Indonesian Economic Studies*, 39(2), 193-214.

Araujo, M. C., Ferreira, F. H., Lanjouw, P., & Özler, B. (2008). Local inequality and project choice: Theory and evidence from Ecuador. *Journal of Public Economics*, 92(5), 1022-1046.

Aspinall, E., & Fealy, G. (2003). Local power and politics in Indonesia. *Singapore: Institute of Southeast Asian Studies*.

Bardhan, P., & Mookherjee, D. (2000). Capture and governance at local and national levels. *American Economic Review*, 135-139.

Bardhan, P., & Mookherjee, D. (2006). Decentralisation and Accountability in Infrastructure Delivery in Developing Countries. *The Economic Journal*,116(508), 101-127.

Barnes, T. D., & Burchard, S. M. (2012). "Engendering" Politics The Impact of Descriptive Representation on Women's Political Engagement in Sub-Saharan Africa. *Comparative Political Studies*, 46(7) 767-790

Barron, P., Diprose, R., & Woolcock, M. J. (2006). *Local conflict and community development in Indonesia: assessing the impact of the Kecamatan Development Program* (No. 10). Decentralization Support Facility.

Beaman, L. A., Chattopadhyay, R., Duflo, E., Pande, R., & Topalova, P. (2008). *Powerful women: does exposure reduce bias?* (No. w14198). National Bureau of Economic Research.

Beard, V. A., Miraftab, F., & Silver, C. (Eds.). (2008). *Planning and decentralization: contested spaces for public action in the global South*. Routledge.

Beath, A., Christia, F., & Enikolopov, R. (2013). Empowering women through development aid: Evidence from a field experiment in Afghanistan. *American Political Science Review*, *107*(03), 540-557.

Bétrisey, F., & Mager, C. (2014). Small Farmers in Florida Province, Bolivia: Reciprocity in Practice. *Mountain Research and Development*, 34(4), 369-374.

Bhavnani, R. R. (2009). Do electoral quotas work after they are withdrawn? Evidence from a natural experiment in India. *American Political Science Review*, *103*(01), 23-35.

Blair, H. (2000). Participation and accountability at the periphery: democratic local governance in six countries. *World development*, 28(1), 21-39.

Blair, H. (2008). Innovations in Participatory Local Governance. *United Nations, Department of Economic and Social Affairs, Division for Public Administration and Development Management, Participatory Government & the Millennium Development Goals*, 77-124.

Bremer, L. L., Farley, K. A., & Lopez-Carr, D. (2014). What factors influence participation in payment for ecosystem services programs? An evaluation of Ecuador's SocioPáramo program. *Land Use Policy*, *36*, 122-133.

Capuma, E. C. (2007). *El Ayni un paradigm de sistema cultural indígena*. Oruro: Ulinku

Cardenas, J. C., Stranlund, J., & Willis, C. (2000). Local environmental control and institutional crowding-out. *World Development*, *28*(10), 1719-1733.

Chambers, R. (2014). *Rural development: Putting the last first*. Routledge

Chattopadhyay, R., & Duflo, E. (2004). Women as policy makers: Evidence from a randomized policy experiment in India. *Econometrica*, *72*(5), 1409-1443.

Chen, X., Lupi, F., An, L., Sheely, R., Vina, A., & Liu, J. (2012). Agent-based modeling of the effects of social norms on enrollment in payments for ecosystem services. *Ecological modelling*, *229*, 16-24.

Cleaver, F. (2001) Institutions, Agency and the Limitations of Participatory Approaches to Development. *Participation: The New Tyranny?* Cooke and Kothari, eds

Clots-Figueras, I. (2011). Women in politics: Evidence from the Indian States. *Journal of Public Economics*, *95*(7), 664-690.

Conning, J., & Kevane, M. (2002). Community-based targeting mechanisms for social safety nets: A critical review. *World development,* 30(3), 375-394.

Cooke, B., & Kothari, U. (Eds.). (2001). *Participation: The new tyranny?*. Zed Books.

Cranford, M., & Mourato, S. (2011). Community conservation and a two-stage approach to payments for ecosystem services. *Ecological economics*, *71*, 89-98.

Cutter, S.L. (1995). The forgotten casualties: women, children, and environmental change. *Global Environmental Chang*e, 5: 181-194.

Dankelman, I. (2002). Climate change: learning from gender analysis and women's experiences of organising for sustainable development. *Gender and Development*, 10 (2): 21-29.

Dasgupta, P. (2011). A matter of trust: Social capital and economic development. *ABCDE*, 119.

Dasgupta, A., & Beard, V. A. (2007). Community driven development, collective action and elite capture in Indonesia. *Development and Change*,38(2), 229-249.

Denton, F. (2002). Climate Change Vulnerability, Impacts, and Adaptation: Why does gender matter? *Gender and Development*, 10 (2):10-20.

Diener, E., & Biswas-Diener, R. (2005). Psychological empowerment and subjective well-being. *Measuring empowerment: Cross-disciplinary perspectives*, 125-140.

Duflo, Esther. (2012). Women's empowerment and economic development. *Journal of Economic Literature* 50(4), 1051-1079

Duflo, E., & Topalova, P. (2004). *Unappreciated Service: Performance, Perceptions, and Women: Leaders in India*. Massachusetts institute of technology (MIT). Department of economics.

Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological review*, *109*(3), 573.

Enarson, E. (2002). *Gender Issues in Natural Disasters: Talking Points and Research Needs*. www.gdnonline.org/resources/ilo-talking.doc (Accessed 24 May, 2010).

Farley, J., & Costanza, R. (2010). Payments for ecosystem services: from local to global. *Ecological Economics*, *69*(11), 2060-2068.

Field, E., Jayachandran, S., & Pande, R. (2010). Do traditional institutions constrain female entrepreneurship? A field experiment on business training in India. *The American Economic Review*, 125-129.

Fisher, B., Kulindwa, K., Mwanyoka, I., Turner, R. K., & Burgess, N. D. (2010). Common pool resource management and PES: lessons and constraints for water PES in Tanzania. *Ecological Economics*, *69*(6), 1253-1261.

Friedman, D. (1992). *Empowerment: The Politics of Alternative Development*. Oxford: Blackwell.

Fritzen, S. A. (2007). Can the design of community-driven development reduce the risk of elite capture? Evidence from Indonesia. *World Development*, 35(8), 1359-1375.

Fung, A. (2006). Varieties of participation in complex governance. *Public administration review*, *66*(s1), 66-75.

Fung, A., & Wright, E. O. (2003). *Deepening democracy: Institutional innovations in empowered participatory governance*. London; New York: Verso

Galasso, E., & Ravallion, M. (2005). Decentralized targeting of an antipoverty program. *Journal of Public economics*, 89(4), 705-727.

Ganuza, E., & Baiocchi, G. (2012). The Power of Ambiguity: How Participatory Budgeting Travels the Globe. *Journal of Public Deliberation*, 8(2), 8.

García-Amado, L. R., Pérez, M. R., Escutia, F. R., García, S. B., & Mejía, E. C. (2011). Efficiency of payments for environmental services: equity and additionality in a case study from a biosphere reserve in Chiapas, Mexico. *Ecological Economics*, *70*(12), 2361-2368.

García-Amado, L. R., Pérez, M. R., & García, S. B. (2013). Motivation for conservation: Assessing integrated conservation and development projects and payments for environmental

services in La Sepultura Biosphere Reserve, Chiapas, Mexico. *Ecological Economics*, *89*, 92-100.

Gaventa, J. (1982). *Power and powerlessness: Quiescence and rebellion in an Appalachian valley*. University of Illinois Press.

Gaventa, J. (2006). Finding the spaces for change: a power analysis. *IDS bulletin*, *37*(6), 23.

Gibson, C., & Woolcock, M. (2008). Empowerment, deliberative development, and local-level politics in Indonesia: Participatory projects as a source of countervailing power. *Studies in comparative international development*, 43(2), 151-180.

Goldfrank, B. (2012). The world bank and the globalization of participatory budgeting. *Journal of Public Deliberation*, 8(2), 7.

Gottlieb, J. (2014). *Why women participate less in civic activity: Evidence from Mali*. APSA Annual Meeting Paper

Grieg-Gran, M., Porras, I., & Wunder, S. (2005). How can market mechanisms for forest environmental services help the poor? Preliminary lessons from Latin America. *World development*, *33*(9), 1511-1527.

Guggenheim, S., Wiranto, T., Prasta, Y., & Wong, S. (2004, May). Indonesia's Kecamatan Development Program: A large-scale use of community development to reduce poverty. In *Scaling Up Poverty Reduction: A Global Learning Process and Conference. Shanghai, May* (pp. 25-27).

Guggenheim, S. (2006). Crises and contradictions: understanding the origins of a community development project in Indonesia. *The search for empowerment: Social capital as idea and practice at the World Bank*, 111-44.

Hadiz, V. R. (2004). Decentralization and Democracy in Indonesia: A Critique of Neo-Institutionalist Perspectives. *Development and Change*, 35(4), 697-718.

Haushofer, Johannes. (2014). The Price of Poverty: Psychology and the Cycle of Need. *Foreign Affairs*, July.

Haushofer, J. and Fehr, E. (2014). On the psychology of poverty. *Science*. 344(6186), 862-867.

Haushofer, J. and Shapiro, J. (2013). Household Response to Income Changes: Evidence from an Unconditional Cash Transfer Program in Kenya. *Massachusetts Institute of Technology*

Isaksson, A. S., Kotsadam, A., & Nerman, M. (2014). The gender gap in African political participation: Testing theories of individual and contextual determinants. *Journal of Development Studies*, *50*(2), 302-318.

Jack, B. K. (2009). Upstream–downstream transactions and watershed externalities: Experimental evidence from Kenya. *Ecological economics*, *68*(6), 1813-1824.

Kabeer, N. (1999). Resources, agency, achievements: Reflections on the measurement of

women's empowerment. *Development and change*, *30*(3), 435-464.

Kerr, J., Vardhan, M., & Jindal, R. (2012). Prosocial behavior and incentives: evidence from field experiments in rural Mexico and Tanzania. *Ecological Economics*, *73*, 220-227.

Kohl, B. (2003). Democratizing Decentralization in Bolivia The Law of Popular Participation. *Journal of Planning Education and Research*, *23*(2), 153-164.

Kollmair, M., & Rasul, G. (2010). Addressing equity and poverty concerns in payments for environmental services. In *Mountain Forum Bulletin* (Vol. 10, No. 1, pp. 12-14).

Kosoy, N., Corbera, E., & Brown, K. (2008). Participation in payments for ecosystem services: case studies from the Lacandon rainforest, Mexico.*Geoforum*, *39*(6), 2073-2083.

Kristiansen, S., Dwiyanto, A., Pramusinto, A., & Putranto, E. A. (2009). Public sector reforms and financial transparency: Experiences from Indonesian districts. *Contemporary Southeast Asia: A Journal of International and Strategic Affairs*, *31*(1), 64-87.

Kumar, S. (2002). Does "participation" in common pool resource management help the poor? A social cost–benefit analysis of joint forest management in Jharkhand, India. *World Development*, 30(5), 763-782.

Landell-Mills, N., & Porras, I. T. (2002). *Silver bullet or fools' gold?: a global review of markets for forest environmental services and their impact on the poor*. London: International Institute for Environment and Development.

Lukes, S. 1974. *Power: A radical view* (Vol. 1). Macmillan: London.

Lund, J. F., & Saito-Jensen, M. (2013). Revisiting the issue of elite capture of participatory initiatives. *World Development*, 46, 104-112.

Mani, A., Mullainathan, S., Shafir, E., & Zhao, J. (2013). Poverty impedes cognitive function. *Science*, *341*(6149), 976-980.

Mansbridge, J., Bohman, J., Chambers, S., Estlund, D., Føllesdal, A., Fung, A., & Manin, B. (2010). The Place of Self-Interest and the Role of Power in Deliberative Democracy. *Journal of political philosophy*, 18(1), 64-100.

Mansuri, G., & Rao, V. (2004). "Community-based and-driven development: A critical review." *The World Bank Research Observer*, 19(1), 1-39.

Mansuri, G., & Rao, V. (2012). Localizing development: does participation work?. *World Bank Publications*.

McLaughlin, K., Satu, A., & Hoppe, M. (2007). *Kecamatan Development Program Qualitative Impact Evaluation*. World Bank Office Jakarta.

Miguel, Edward, and Mary Kay Gugerty. (2005). Ethnic Diversity, Social Sanctions, and Public Goods in Kenya. *Journal of Public Economics* 89 (December): 2325–68.

Miranda, M., Porras, I. T., & Moreno, M. L. (2003). *The social impacts of payments for*

environmental services in Costa Rica: a quantitative field survey and analysis of the Virilla watershed (No. 1). IIED.

Morrone, A., Tontoranelli, N., & Ranuzzi, G. (2009). *How good is trust?: Measuring trust and its role for the progress of societies* (No. 2009/3). OECD Publishing.

Mosse, D. (2001). People's knowledge', participation and patronage: Operations and representations in rural development. *Participation: The new tyranny*, 16-35.

Muradian, R., Corbera, E., Pascual, U., Kosoy, N., & May, P. H. (2010). Reconciling theory and practice: An alternative conceptual framework for understanding payments for environmental services. *Ecological economics*,*69*(6), 1202-1208.

Mwangi, E., & Ostrom, E. (2009). A century of institutions and ecology in East Africa's rangelands: Linking institutional robustness with the ecological resilience of Kenya's Maasailand. In *Institutions and sustainability* (pp. 195-222). Springer Netherlands

Mullainathan, S., & Shafir, E. (2013). *Scarcity: Why having too little means so much*. Macmillan.

Narayan, D. (1998). Participatory rural development. *Agriculture and the Environment: Perspectives on Sustainable Rural Development,* 103.

Narayan-Parker, D. (Ed.). (2005). *Measuring empowerment: cross-disciplinary perspectives*. World Bank Publications.

Norris, F. H., Stevens, S. P., Pfefferbaum, B., Wyche, K. F., & Pfefferbaum, R. L. (2008). Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness. *American journal of community psychology*, *41*(1-2), 127-150.

Olken, B. A. (2005). Monitoring corruption: Evidence from a field experiment in Indonesia (No. w11753). *National Bureau of Economic Research*.

Olken, B. (2006). Corruption and the costs of redistribution: Micro evidence from Indonesia. *Journal of Public Economics* 90, 853-870.

Omolo, N. A. (2010). Gender and climate change-induced conflict in pastoral communities: Case study of Turkana in northwestern Kenya. *African Journal on Conflict Resolution*, *10*(2)

Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*. Cambridge university press.

Ostrom, E. (2007). "Institutional rational choice: An assessment of the institutional analysis and development framework." In *Theories of the Policy Process*, 2nd ed., P.A. Sabatier (ed.). Cambridge, MA: Westview Press.

Ostrom, E., Lam, W. F., & Lee, M. (1994). The performance of self-governing irrigation systems in Nepal. *Human Systems Management,* 13(3), 197-207.

Pacheco, P. (2004). What lies behind decentralisation? Forest, powers and actors in lowland Bolivia. *The European Journal of Development Research*,*16*(1), 90-109.

Pagiola, S., Arcenas, A., & Platais, G. (2005). Can payments for environmental services help reduce poverty? An exploration of the issues and the evidence to date from Latin America. *World development*, *33*(2), 237-253.

Pan, L., & Christiaensen, L. (2012). Who is vouching for the input voucher? Decentralized targeting and elite capture in Tanzania. *World Development*,40(8), 1619-1633.

Pateman, C. (2012). Participatory democracy revisited. *Perspectives on Politics*, 10(01), 7-19.

Platteau, J. P. (2004). Monitoring elite capture in Community-Driven development. *Development and Change*, 35(2), 223-246.

Puhani, P. A. (2012). The treatment effect, the cross difference, and the interaction term in nonlinear "difference-in-differences" models. *Economics Letters*, *115*(1), 85-87.

Prasetyo, S. A. (Ed.). (2003). *Indonesia's post-Soeharto democracy movement*. University of Hawaii Press.

Robinson, L. W., & Berkes, F. (2011). Multi-level participation for building adaptive capacity: Formal agency-community interactions in northern Kenya.*Global Environmental Change*, *21*(4), 1185-1194

Rode, J., Gómez-Baggethun, E., & Krause, T. (2014). Motivation crowding by economic incentives in conservation policy: A review of the empirical evidence. *Ecological Economics*, 109, 80-92.

Southgate, D., & Wunder, S. (2009). Paying for watershed services in Latin America: a review of current initiatives. *Journal of Sustainable Forestry*, *28*(3-5), 497-524.

Seabright, P. (1996). Accountability and decentralisation in government: An incomplete contracts model. *European economic review,* 40(1), 61-89.

Sen, A. K. (1999). *Development as Freedom*. New York: Knopf Press.

Sheely, R. (2015). Mobilization, Participatory Planning Institutions, and Elite Capture: Evidence from a Field Experiment in Rural Kenya. *World Development*, *67*, 251-266.

Sidel, J. T. (2004). Bossism and democracy in the Philippines, Thailand and Indonesia: towards an alternative framework for the study of "local strongmen".*Politicising democracy: The new local politics of democratisation*, 51-74.

Sintomer, Y., Herzberg, C., & Allegretti, G. (2010). *Learning from the South: Participatory Budgeting Worldwide-an Initation to Global Cooperation: Study*. Service Agency Communities in One World.

Uphoff, N. T. (1986). *Improving international irrigation management with farmer participation: Getting the process right*. Boulder, CO: Westview Press

Van Hecken, G., Bastiaensen, J., & Vásquez, W. F. (2012). The viability of local payments for watershed services: Empirical evidence from Matiguás, Nicaragua. *Ecological*

Economics, *74*, 169-176.

Vatn, A. (2010). An institutional analysis of payments for environmental services. *Ecological Economics*, *69*(6), 1245-1252.

van Noordwijk, M., & Leimona, B. (2010). Principles for fairness and efficiency in enhancing environmental services in Asia: payments, compensation, or co-investment. *Ecology and Society*, *15*(4), 17.

Velez, M. A., Murphy, J. J., & Stranlund, J. K. (2010). Centralized and decentralized management of local common pool resources in the developing world: experimental evidence from fishing communities in Colombia. *Economic Inquiry*, *48*(2), 254-265.

Verba, S., Schlozman, K. L., Brady, H., & Nie, N. H. (1993). Citizen Activity: Who Participates? What Do They Say?. *American Political Science Review*,*87*(02), 303-318.

World Bank. (2012). *World Development Report 2012: Gender Equality and Development*. World Bank: Washington DC

Wunder, S. (2006). Are direct payments for environmental services spelling doom for sustainable forest management in the tropics. *Ecology and Society*,*11*(2), 23.

Wunder, S. (2008). Payments for environmental services and the poor: concepts and preliminary evidence. *Environment and development economics*,*13*(03), 279-297.

Wunder, S., & Vargas, M. T. (2005). Beyond "markets": why terminology matters. *Guest editorial. The Ecosystem Marketplace, Katoomba Group, Washington, DC Available from http://ecosystem marketplace. net/pages/article. opinion. php*.

Zbinden, S., & Lee, D. R. (2005). Paying for environmental services: an analysis of participation in Costa Rica's PSA program. *World development*,*33*(2), 255-272.

Appendix 1.1: Survey Questions Used in Regression Analysis (Translated from Spanish)

Questions related to Financial Motivations and Costs of Compliance
How many hectares do you have available in total, including ranch, brush, forest, cloud forest and farmland? How many hectares of forest that you aren't using? Do you own this forest? Rent it? Other? How many hectares of grazing or pastureland do you have available? How many hectares of cultivated land do you work on, whether your own lands or not? Do you own your home or rent it? How many rooms does it have? Do you own cows? How many cows do you own in total? What kinds of other economic activities did you or other members of the household engage in during the last year? Have you or anyone else in your household taken a loan during the last 12 months? Now I'd like to speak with you about how much trust you have in some organizations. For each one, I'd like to know if you always trust, usually trust, sometimes or never trust this kind of organization. The municipal government? The departmental government? Institutions or NGOs?
Questions related to Social Motivations
Since which generation has your family lived in this community? 1.Your own generation, 2. Your parents' 3. Your grandparents' 4. Great-grandparents 5. Even earlier Now I would like to speak about your family's participation in community organizations. Of the following, can you tell me if somebody in your family or you yourself participates, holds an officer's position currently or held a position in the past? In the OTB? In how many OTB meetings did you or someone in your household participate in last month? Have you or someone else in your household done work for the community in the last 12 months? Can you remember how many times in the last 12 months? Do you participate in minga, faena or ayni? Now I will read some statements and I would like to know if you agree with each one. There is no correct answer, I just want to know your opinion. • Generally, the people in my community cooperate to resolve community problems. • The majority of people in my community help me if I need it. • If a person works more than others, it's fair that they earn more money. • If a person earns more than others, they must share with the rest. Do all members of your community contribute equally to the [environmental] problem?

Do all members of your community suffer equally from the [environmental] problem?

Questions related to Environmental Motivations

I'm going to present you with some values that may be taught to children in the home. Of these values, can you choose the two that you think are the most important? Independence, Creativity, Protecting the Environment, Sharing with Others, Obedience, Being a Good Student, Being Successful

What benefits does your family receive from the forest? Can you name three benefits?

Would you say that the quality or quantity of water is a problem in your community?

Now I will read some statements and I would like to know if you agree with each one. There is no correct answer, I just want to know your opinion.

- In order to improve quality of life, it is necessary to harm the environment.
- We can have higher economic incomes if we protect the environment.
- The government should be responsible for imposing laws that tell people what they can do with their lands so that they do less harm to the environment.
- If your neighbors don't do anything for the environment, then you shouldn't either.

Do you think that the forest is in better, the same or worse condition compared with how it was five years ago?

What can people in your community do to protect the environment? Can you give me three ideas?

OTB-Level Questions

How many OTB meetings did your community hold in the last month?

Is community work mandatory [through the OTB] in this community?

Do people use minga/faena or ayni when they do work?

Appendix 1.2: Determinants of Contract Take-Up, Including Non-Resident Participants

	(1)	(2)	(3)
Age	-0.00882		-0.00770
	(0.106)		(0.173)
Education	0.0472		0.0410
	(0.059)		(0.114)
Total Land	0.00195		0.00167
	(0.170)		(0.221)
Percent Forested	0.958**		0.807*
	(0.006)		(0.024)
Percent Pasture Land	0.789**		0.731**
	(0.002)		(0.005)
Property Ownership	0.854***		0.904***
	(0.000)		(0.000)
Obstacles to Access	0.414*		0.396*
	(0.035)		(0.049)
Number of Rooms In Home	0.214***		0.195***
	(0.000)		(0.000)
Number of Cattle	0.00827		0.00861
	(0.102)		(0.087)
Alternative income	-0.334*		-0.402*
	(0.041)		(0.016)
Debt	0.255		0.204
	(0.275)		(0.392)
Distrust of Institutions	0.00948		0.0523
	(0.915)		(0.574)
Environment = Incomes		0.00898	-0.0422
		(0.915)	(0.642)
Prioritizes Environment		0.212	0.127
		(0.119)	(0.401)
Views Water as Problem		-0.0157	-0.133
		(0.918)	(0.434)
Generations in Community		0.233***	0.189*
		(0.000)	(0.011)
OTB Membership		0.240**	0.183*
		(0.002)	(0.035)
People Cooperate		0.0921*	0.0577
		(0.048)	(0.277)
Constant	-1.120	-1.149	-1.774
	(0.239)	(0.126)	(0.076)
Observations	1228	1392	1211

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix 2.1

Effect of DPK Grant Spending on Change in RW Poverty Rate

	Change in RW Poverty Rate 2010-2012
Executed Budget to RW in Year 2011	-6.65e-09
	(4.81e-08)
Constant	7.588
	(4.049)
Observations	540

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix 3.1: Survey questions used to proxy dimensions of power

Psychological Power

Self Efficacy
How much do you agree with the following statements? For each question below, choose from:
Strongly Disagree - Disagree - Neither Agree nor Disagree - Agree - Strongly Agree

- I can solve most problems if I invest the necessary effort.
- If I am in trouble, I can usually think of a solution.
- If someone opposes me, I can still find a way to get what I want.
- It is easy for me to stick to my aims and accomplish my goals.
- I feel well-prepared to protect my family in cases of drought.

Collective Efficacy
How much do you agree with the following statements? For each question below, choose from:
Strongly Disagree - Disagree - Neither Agree nor Disagree - Agree - Strongly Agree

- This community is ineffective compared to other villages at achieving its goals
- We can resolve crises in the community without any negative aftereffects
- Our community can present a united vision to outsiders.
- We can work together to improve conditions in the community.
- We can persuade the government to provide better services to people in this community.

Political Efficacy
How much do you agree with the following statements? For each question below, choose from:
Strongly Disagree - Disagree - Neither Agree nor Disagree - Agree - Strongly Agree

- I consider myself well qualified to participate in decision-making in the village.
- I feel that I have a pretty good understanding of the important political issues in Marsabit County.
- I feel that I could do as good a job in a leadership position in this village as most other people.
- I think that I am as well-informed about politics and government as most people.
- If a public official came to our village to discuss important issues, I would feel confident expressing my opinion.

Social Power

Financial Capital
In the last 30 days, how much has the household earned from:

- Livestock sale?
- Meat/fish sale?
- Hide/skin sale?
- Milk?
- Crops?
- Charcoal?
- Firewood?
- Fetching Water?
- Casual Labor?
- Employment & Salaried Labor?
- Tourism activity?
- Pension?
- Trading from NGO-sponsored business?
- Trading from other business?

[Note: These items summed to create a single household income variable]

Human Capital: Political Knowledge

- True or False: The Constitution states that at least one-third of the County Executive members must be women.
- True or False: The Constitution forbids female genital mutilation.
- Which level of government is responsible for Police services? County or National
- Which level of government is responsible for Pre-Primary Education? County or National
- Which branch of government is responsible for Drafting new laws? County Assembly OR County Executive
- What is the Uwezo Fund?
- Are you aware of any female political leaders in this region? Yes No
- Please name them.

Social Capital: Trust

How much trust do you place in each of the following?

A lot of trust - Some trust - A little trust - No trust

- Spouse
- Family
- Friends
- Community members
- Other women in the community
- Strangers
- Community Leader
- County Government
- National government

Political Power

Decision-making Power in the Household

In your household, who has the final say with respect to:

- Buying Food?
- Children's Medical Expenses?
- Sending the children to school?
- Paying children's School Fees?
- Purchasing Livestock?
- Purchasing Household Items?

[Responses coded as follows: 1=Men Only 2=Men and Women Together 3=Women Only]

Decision-making Power in the Community

- Have you ever attended a session where villagers gather to make a decision?
- Have you ever spoken at this meeting?
- How much attention do you feel local leaders pay to what people like you think before deciding what to do?

Decision-making Power in the Government

In the last three years, have you personally done any of the following things:

- Voted Yes No
- Petitioned the government for something Yes No
- Actively participated in an association. Yes No
- Made a personal contact with an influential person. Yes No
- Actively participated in an information campaign. Yes No
- Taken part in a protest march or demonstration. Yes No
- Contacted your elected representative. Yes No
- Talked with other people in your area about a problem. Yes No
- Made a donation of your time or money Yes No

Observable Actions

Actions Taken at the Household Level

- In the past year, have you taken any actions in your own household in order to better prepare your family for emergencies or to improve your quality of life? Yes No I Don't Know
- Have any of these actions been successful? Yes No I Don't Know

Actions Taken at the Community Level

- In the past year, have you taken any actions together with others in the community in order to better prepare your family for emergencies or to improve your quality of life? Yes - No - I Don't Know
- Have any of these actions been successful? Yes No I Don't Know

Actions Taken at the Government Level

- In the past year, how often have members of this village gotten together and jointly petitioned government officials or political leaders with village development as their goal?
- Have any of these actions been successful? Yes No I Don't Know

Appendix 3.2: Balance Test Comparing Survey Drop-Outs with Final Study Sample

	Remained in Survey		Could Not Be Relocated		
	mean	sd	mean	sd	ttest
Age	35.13	11.41	33.636	11.360	0.24
Literacy	0.04	0.21	0.00	0.00	0.10
Income (KES)	6807.67	18129.30	6118.57	8694.46	0.41
NGO Business Member	0.52	0.50	0.34	0.48	0.03*
Treatment Group	0.53	0.50	0.60	0.50	0.22
Self-Efficacy	-0.18	1.65	0.37	1.57	0.04*
Collective Efficacy	-0.08	1.65	0.27	1.47	0.12
Political Efficacy	-0.25	1.24	-0.36	1.19	0.32
Score on Political Quiz	0.65	0.94	0.66	0.73	0.49
Household Action	0.14	0.35	0.20	0.41	0.18
Community Action	0.11	0.32	0.20	0.41	0.09
HH Decision: Food	1.66	0.91	1.51	0.85	0.19
HH Decision: School Fees	1.43	0.81	1.41	0.80	0.44
HH Decision: Livestock	1.43	0.80	1.39	0.80	0.39
Community Decision: Attended Meetings	0.27	0.44	0.31	0.47	0.29
Community Decision: Leaders Pay Attn	2.87	0.98	2.97	1.14	0.29
Government Decision: Voted	0.95	0.22	0.86	0.36	0.02*
Government Decision: Petitioned	0.04	0.21	0.09	0.28	0.15
Observations		227		35	